

A Field Guide to

Common Riparian Plants of New Hampshire



New Hampshire Department of Environmental Services
Volunteer River Assessment Program



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Introduction

Riparian Area: *An area of land and vegetation adjacent to a stream that has a direct effect on the stream. This includes woodlands, vegetation, and floodplains.*

Purpose of This Guide







This field guide provides brief, simple, and easy identification of common riparian plants, shrubs, and trees of New Hampshire. Although information in this guide is drawn from several sources, it is not intended to be a comprehensive listing of all the riparian plant species in New Hampshire. Hopefully, it will provide the casual observer with aid in identification of the most frequently encountered species and references to assist in further, more detailed studies for those wishing to know more about riparian ecosystems. Use of additional field guides to supplement this one and to identify plants not included in this guide is suggested. Other helpful field guides can be found in Appendix A.

How to Identify Plants

There are several ways to identify plants. In field guides, they are typically identified by photos, drawings, and descriptions. In the field, they can also be identified by touch, taste, smell, color, and form. Their branching habit, leaf form, and vein pattern can also aid in identification. Plants can also exhibit different characteristics during different times of the year. In addition, it is useful to know their habitat, or place where they grow.



Organization of This Guide

This field guide is organized into six sections:

-  **In the Water: Submerged Aquatic Plants:** Plants that have most of their leaves growing under water; some floating leaves may also be present. They are found from shallow to deep zones.
-  **On the Edge: Emergent Herbaceous Plants:** Plants that have leaves that extend above the water's surface and are usually found in shallow water.
-  **Ferns:** Non-flowering plants that bear spores rather than seeds with flattened leaf-like “fronds” that are further divided.
-  **Woody Shrubs:** Woody plants which are generally shorter than trees and smaller in trunk size. They have clusters of stems rising directly from the ground and generally have a “bushy” appearance with no special crown shape.
-  **Climbing Vines:** Plants with a weak stem that derive support from climbing, twining, or creeping along a surface.
-  **The Canopy (Trees):** Woody plants that usually grow from the ground with a single erect stem or trunk. The main stem may be massive and is often unbranched for several feet above the ground. Trees can reach a considerable height at maturity.

A plant species will often have several common names. This field guide is organized alphabetically by the preferred or most-used common name, with the Latin/scientific name below.

Plant species descriptions include the following:

-  **Status:** Whether the plant is native or non-native/exotic/invasive. Those plants that are non-native/exotic/invasive which are also prohibited in New Hampshire are identified as such.
-  **Habitat:** Describes the best conditions for growth of this plant and where to locate it.

- 🌳 **Height:** Describes how tall or long the plant grows.
- 🌳 **Bark:** In the Woody Shrub and Tree sections, describes the unique features of the bark.
- 🌳 **Buds:** In the Woody Shrub and Tree sections, describes the unique features of the buds.
- 🌳 **Stem:** In the Woody Shrub section, describes the unique features of the stem.
- 🌳 **Leaves:** Describes the unique features of the leaves.
- 🌳 **Flowers:** Describes the unique features of the flowers.
- 🌳 **Flowering Period:** Describes the time of year in which the flowers bloom.
- 🌳 **Fruit:** Describes the unique features of the fruit.
- 🌳 **Twigs:** In the Woody Shrub and Tree sections, describes the unique features of the twigs.
- 🌳 **Value:** Explains the worth of the plant to the other members of the ecosystem.
- 🌳 **Similar Species:** Describes the unique features to help distinguish this plant from others. Additional information about some of the related plants is also provided.

In addition, appendices to this field guide include:

- 🌳 Appendix A: Other Helpful Field Guides
- 🌳 Appendix B: Glossary of Terms
- 🌳 Appendix C: Leaf Shapes and Arrangements
- 🌳 Appendix D: Native Shoreland/Riparian Buffer Plantings for New Hampshire

For More Information on Exotic Species

Additional information on exotic aquatic plants can be obtained by contacting:

New Hampshire Department of Environmental Services
Exotic Species Program
 29 Hazen Drive, PO Box 95
 Concord, NH 03302
 (603) 271-2248
<http://www.des.nh.gov/WMB/ExoticSpecies/>

While additional information on exotic terrestrial plants can be obtained by contacting:





































New Hampshire Department of Agriculture, Markets & Food
Invasive Species Program
 25 Capitol Street, Second Floor
 Concord, NH 03302
 (603) 271-2561
http://nh.gov/agric/divisions/plant_industry/plants_insects.htm

Enjoy a Riparian River-Walk!

I hope this field guide will inspire you to increase your interest and knowledge of aquatic plants and their relationship in riparian environments. Rivers and streams are fragile ecosystems of natural beauty and intrigue. I encourage you to enjoy a riparian “river-walk” during each season and not only study the vegetative communities but their interaction with both terrestrial and aquatic insects, fish, and other wildlife.

Jen Drociak

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The background of the slide is a photograph of submerged aquatic plants, likely eelgrass, in a body of water. The plants have long, thin, green leaves that are visible both above and below the water's surface. The water is slightly rippled, and the overall color palette is dominated by greens and blues.

In The Water: Submerged Aquatic Plants

BLADDERWORT *Utricularia vulgaris*



- ✚ **Status:** Native
- ✚ **Habitat:** Lakes, ponds, slow-moving streams and rivers, bogs.
- ✚ **Height:** 2-3 feet long.
- ✚ **Stem:** Long, slender, flexible, branched, generally becoming detached from rooting base and free-floating.
- ✚ **Leaves:** Alternate, filamentous, finely-forked, accompanied by attached “bladders.”
- ✚ **Flower:** Stalks occurring at irregular intervals along stem. Each stalk bearing 6-20 small, yellow, two-lipped “snapdragon-like” flowers and emerging several inches out of the water (or mud).
- ✚ **Flowering Period:** June into September.
- ✚ **Fruit:** Capsule containing many seeds.
- ✚ **Value:** Trailing stems provide food and cover for fish. Since they are free-floating, they can grow in areas with very loose sediment, providing needed fish habitat in areas that are not readily colonized by rooted plants.
- ✚ **Similar Species:** Fanwort (*Cabomba caroliniana*); buttercup (*Ranunculus spp.*); coontail (*Ceratophyllum spp.*), milfoil (*Myriophyllum spp.*). Bladderwort may be distinguished from these plants by the alternate, forked leaves branching from the base into 2 main divisions, and presence of the “bladders” on the leaves.

COONTAIL/HORNWORT *Ceratophyllum demersum*

- ✚ **Status:** Native
- ✚ **Habitat:** Lakes, ponds, slow-moving streams and rivers.
- ✚ **Height:** Varying in length according to depth of water.
- ✚ **Stem:** Long, toothed, trailing, much branched.
- ✚ **Leaves:** Whorled, smooth, up to 1 ½ inches long, usually divided into 3-forked, nearly thread-like flattened and toothed segments.
- ✚ **Flower:** Tiny, hidden singly in the axils of the leaves. Male and female occurring separately.
- ✚ **Flowering Period:** July through September.
- ✚ **Fruit:** Dark brown seed, approximately ¼ inch long, with two spines at the base and one at the tip.
- ✚ **Value:** The stiff whorls of leaves offer habitat for many species, especially during the winter when many other plants are reduced to roots and rhizomes. Both foliage and fruit are grazed by waterfowl. Bushy stems are home to many invertebrates and provide important shelter and foraging opportunities for fish.
- ✚ **Similar Species:** Mermaid-weed (*Proserpinaca palustris*); fanwort (*Cabomba caroliniana*); buttercup (*Ranunculus spp.*). Coontail may be distinguished from these plants by its whorled, toothed leaves, its tiny sessile axillary flowers and beaked fruits.



VARIABLE MILFOIL

Myriophyllum heterophyllum



- ✚ **Status:** **Non-Native/Exotic, Invasive. Invades waterbodies, suppresses native species and destroys fish habitat. This species is prohibited in New Hampshire.**
- ✚ **Habitat:** Lakes, ponds, slow-moving streams and rivers; in mud to water depths of up to 10 feet.
- ✚ **Height:** Slender, flexible, long (up to 15 feet in length). Tip often emerging above water when flowering.
- ✚ **Stem:** Round, thick, reddish.
- ✚ **Leaves:** Mostly submerged, opposite or whorled, approximately 1 ½ inches long. Emerged leaves occurring only toward the stem tips.
- ✚ **Flower:** Small, inconspicuous, brownish, occurring singly in the axils of the upper leaves, usually above water during flowering.
- ✚ **Flowering Period:** Late June through early August.
- ✚ **Fruit:** Very small, four-lobed, nearly cubical, nutlike.
- ✚ **Similar Species:** Mermaid-weed (*Proserpinaca palustris*); fanwort (*Cabomba caroliniana*); buttercup (*Ranunculus spp.*); Coontail (*Ceratophyllum spp.*). Variable milfoil may be distinguished from these plants by the numerous, scattered, finely pinnately dissected leaves and lax floating or upright stem.

WATERWEED/DITCHMOSS

Elodea canadensis

- ✚ **Status:** Native
- ✚ **Habitat:** Lakes, ponds, slow-moving streams and rivers.
- ✚ **Height:** Up to 3 feet long; occasionally forming dense masses.
- ✚ **Stem:** Slender, smooth, many-branched.
- ✚ **Leaves:** Long, upper and middle leaves in whorls of 3 with very finely-toothed margins. Those of the male plants linear or lanceolate, pointed at the tip, up to ½ inch long and 1/6 inch wide. Those of the female plants broadly lanceolate, rounded, or slightly pointed at the tip, up to 5/8 inch long and ¼ inch wide.
- ✚ **Flower:** Male and female flowers occur on separate plants from the axils to the leaves.
- ✚ **Flowering Period:** July to September.
- ✚ **Fruit:** A few to many-seeded cylindrical capsule.
- ✚ **Value:** Branching stems offer valuable habitat and grazing opportunities for fish. Also provides food for muskrats and waterfowl. They can eat the plant itself or feed on a wide variety of invertebrates that use the plant as habitat.



WILD CELERY/TAPE GRASS

Vallisneria americana

- 🌿 **Status:** Native
- 🌿 **Habitat:** Lakes, ponds, slow-moving streams and rivers. In water 4 - 6 feet deep.
- 🌿 **Height:** 1-3 feet long.
- 🌿 **Stem:** Slender, embedded horizontally in the mud near the surface and usually rooting at intervals.
- 🌿 **Leaves:** Narrow, ribbon-like, 1-3 feet in length, with a light-colored center stripe, mostly submerged with the tips floating.
- 🌿 **Flower:** Unisexual; the female flower solitary and floating at the surface at the end of a long stalk. The male flower on another plant, submerged and attached to a short stalk near the bottom, breaking off and floating to the surface at flowering time.
- 🌿 **Flowering Period:** July to October.
- 🌿 **Fruit:** Cylindrical pod up to 2 inches long, attached to a long stalk which coils up, drawing the fruit under water to mature.
- 🌿 **Value:** Source of food for waterfowl. All portions of the plant are consumed; foliage, rhizomes, tubers, and fruit. Muskrat are also known to graze on it. Beds provide shade, shelter, and food for fish.



Photo courtesy of Amy Smagula



On the Edge: Emergent Herbaceous Plants



ARROW ARUM *Peltandra virginica*

- ❖ **Status:** Native
- ❖ **Habitat:** Edges of lakes, ponds, marshes, streams and rivers. In mud or shallow water.
- ❖ **Height:** Up to 3 feet tall; growing in loose colonies.
- ❖ **Stem:** True stem lacking. Leaf and flower stalks arising from a thick root.
- ❖ **Leaves:** Blades thick and somewhat fleshy, up to 18 inches long. Lower lobes separating and tapering to the tips. Each lobe and the main stem have a prominent midvein. Leaf blade with a vein running along the entire outline just inside the margin.
- ❖ **Flower:** Very small, spathe almost completely covering the thin, whitish, fleshy spike. White male flowers above green female flowers, sheath tapering to the base and tip, green outside and white inside. Flowering cluster at the end of a long, naked stalk.
- ❖ **Flowering Period:** May to July.
- ❖ **Fruit:** Globular head of green or blackish berries enclosed in a green leathery case, the stalk curved downward at maturity.
- ❖ **Similar Species:** Arrowhead (*Sagittaria latifolia*). Arrow Arum may be distinguished by its 3 prominent veins.



ARROWHEAD/DUCK-POTATO

Sagittaria latifolia



- ✿ **Status:** Native
- ✿ **Habitat:** Edges of lakes, ponds, marshes, streams and rivers. In mud or completely submerged.
- ✿ **Height:** Up to 4 feet tall.
- ✿ **Stem:** Lacking an upright visible stem. Leaves and flowering stalk arising from a fibrous rooted base. Several underground runners, each giving rise to a tuber the size of a small potato up to 2 inches wide.
- ✿ **Leaves:** Submerged leaves flexible, ribbon-like, 2-4 feet long. Emergent leaves appear to clasp the base of the flowering stalk, blades variable in outline, most typically broadly to narrowly arrowhead-shaped, with triangular or elliptic lobes up to 12 inches long and 8 inches wide.
- ✿ **Flower:** Petals in whorls of three with a yellow center, up to 1 ½ inch wide. Male flowers at the top with female ones lower on the flower stalk.
- ✿ **Flowering Period:** July through September.
- ✿ **Fruit:** Flat, winged, crowded in a flattened head up to ½ inch wide. Ball-shaped fruit clusters of green nutlets.
- ✿ **Value:** Beneath the mud, rhizomes produce edible starchy tubers, eaten by ducks and muskrats and known as “duck potatoes.” Waterfowl depend on the high-energy tubers during migration. The seeds are eaten by a wide variety of ducks, geese, marsh birds, and shorebirds. Muskrats, beavers and porcupines will eat both tubers and leaves. Arrowhead beds offer shade and shelter for young fish.



BLUE-FLAG IRIS

Iris versicolor



- ✿ **Status:** Native
- ✿ **Habitat:** Edges of lakes, ponds, marshes, streams and rivers. In less than 3 feet of water.
- ✿ **Height:** Up to 2 ½ feet tall. Growing in small groups; in flat plane or fan-like arrangement.
- ✿ **Stem:** Stout, robust, erect, upright, flattened on one side, simple or with one or two branches, from creeping rhizomes embedded in the mud. Rhizome very shallow and sometimes exposed above the sediment.
- ✿ **Leaves:** Appearing basal but actually alternate, bluish-green, sword-like and less than 3 inches long, the stem leaves up to 14 inches long and ¾ inch wide; both basal leaves and stem leaves ascending in fan-like clusters. Flower stalks are taller than the leaves.
- ✿ **Flower:** Large, purplish-blue, stalked, with 3 larger outer sepals drooping, whitish toward the base, and 3 smaller petals in the center erect.
- ✿ **Flowering Period:** June through July.
- ✿ **Fruit:** Capsule up to 2 ½ inches long with 3 rounded edges, contains numerous flattened seeds often persisting into winter.
- ✿ **Value:** Provides food and cover for waterfowl and wildlife.
- ✿ **Similar Species:** Basal leaves may be confused with those of cattail (*Typha* spp.) or sweet flag (*Acorus calamus*). Blue flag iris may be distinguished by blueish-green leaves arranged in flat plane.



Photo courtesy of Amy Smagula

BLUE VERVAIN

Verbena hastata



- 🌿 **Status:** Native
- 🌿 **Habitat:** Edges of ponds, marshes, streams and rivers.
- 🌿 **Height:** Up to 4 feet tall; growing in small colonies.
- 🌿 **Stem:** Rough, four-sided, fairly straight, arising from a fibrous rooted base.
- 🌿 **Leaves:** Up to 6 inches long, stalked, sometimes lobed at the base, tapered at the tip, with a rough surface.
- 🌿 **Flower:** 5 small blue petals in a pencil-like spike occurring singly or in clusters with individual flowers blooming periodically from the base to the top of spike.
- 🌿 **Flowering Period:** July into October.
- 🌿 **Fruit:** Separating into four nutlets.





BONESET /THOROUGHWORT *Eupatorium perfoliatum*

- ✚ **Status:** Native
- ✚ **Habitat:** Wet meadows, marshes, edges of lakes, ponds, streams, and rivers.
- ✚ **Height:** Up to 5 feet tall. Branched, growing in small colonies.
- ✚ **Stem:** Robust, erect, hairy. Stout, coarse, lightly-downy, arising from a fibrous root base.
- ✚ **Leaves:** Opposite, lanceolate, pointed, toothed, with the base surrounding the stem. Heavily veined. Up to 8 inches long and 2 inches wide at the base, tapering at the tip with toothed and often many margins, rough surfaces, and prominent veins beneath.
- ✚ **Flower:** Greenish-white in 3-4 terminal clusters up to 8 inches long.
- ✚ **Flowering Period:** Late July through October.



BUR-REED

Sparganium eurycarpum



- 🌿 **Status:** Native
- 🌿 **Habitat:** Edges of lakes, ponds, streams, and rivers. Shallow water up to 1 foot deep.
- 🌿 **Height:** Up to 3 feet tall.
- 🌿 **Stem:** Stout, upright, smooth, arising from rhizomes embedded horizontally in the mud a few inches beneath the surface. Zigzag stalks.
- 🌿 **Leaves:** Alternate, linear, submerged and floating, ribbon-like up to 4 feet long. Emergent stem leaves narrow, elongate, up to 1 ½ feet tall, triangular in cross-section, and ridged on their back side. Certain species are erect while others are floating.
- 🌿 **Flower:** Lower bulbs or burs are clusters of greenish female flowers. Upper smaller heads are white-petalled male flowers.
- 🌿 **Flowering Period:** June through August.
- 🌿 **Fruit:** A burr-like head on a short or long stalk.
- 🌿 **Value:** Colonies provide nesting sites for waterfowl and shorebirds. The fruit is eaten by a variety of waterfowl. The whole plant is grazed by muskrat and deer.
- 🌿 **Similar Species:** Underwater and floating leaves of wild celery (*Vallisneria americana*) and arrowhead (*Sagittaria spp.*). Bur-reed can be distinguished from these plants by the very numerous cross veins between the parallel veins of the underwater leaves. (Cross veins are present in the underwater leaves of arrowhead but they are sparse and scattered).





CARDINAL FLOWER

Lobelia cardinalis

- ✿ **Status:** Native
- ✿ **Habitat:** Shrub and forested wetlands, shaded edges of rivers and streams.
- ✿ **Height:** Up to 5 feet tall; often growing in large colonies.
- ✿ **Stem:** Smooth, stout, arising from a horizontal rhizome embedded shallowly in mud.
- ✿ **Leaves:** Alternate, lanceolate to oblong, toothed, tapering at both ends. Lower leaves short-stalked, upper leaves stalkless. Up to 6 inches long and 1 ½ inches wide. Smooth to slightly downy, thin.
- ✿ **Flower:** Long, bright-red 2-lipped tubular flower occurring on terminal spike, with the upper lip 2-lobed and lower lip 3-lobed.
- ✿ **Flowering Period:** July into October.
- ✿ **Fruit:** Many-seeded capsule with two portions.
- ✿ **Value:** Cardinal flower is pollinated mostly by hummingbirds, since most insects find it difficult to navigate the long tubular flowers.



BROAD-LEAF CATTAIL

Typha latifolia



- ✿ **Status:** Native
- ✿ **Habitat:** Marshes, wet swales, edges of lakes and ponds, streams, and rivers.
- ✿ **Height:** Up to 10 feet tall
- ✿ **Stem:** Upright, stiff, growing in dense stands from thick, extensively -creeping underground rhizomes
- ✿ **Leaves:** Green or bluish-green, upright, linear, 2-6 feet long and up to 1 inch wide arising from base or alternating along the stem. Leaves have a spongy feel.
- ✿ **Flower:** Many small flowers packed into tight cigar-like clusters creating a lower female spike topped by a smaller male spike with no gap between the two flower types. Female spike persists turning into the familiar dark brown “tail.”
- ✿ **Flowering Period:** June into August.
- ✿ **Fruit:** Small, seed-like, surrounded by many bristles attached to the base.
- ✿ **Value:** Provides nesting habitat for many birds, such as the red-winged blackbird. Shoots and rhizomes are eaten by muskrats and geese. Submersed stalks provide spawning habitat and shelter for fish. One of only a few plants where all parts are edible to humans.
- ✿ **Similar Species:** Narrow-leaf cattail (*Typha angustifolia*) has narrower leaves, a narrower fruiting head, and a gap between the male and female flower clusters.



COMMON REED *Phragmites australis*



- 🌿 **Status:** Most stands are Non-Native/Exotic, Invasive. This species is prohibited in New Hampshire.
- 🌿 **Habitat:** Fresh and brackish marshes, edges of lakes and ponds, streams, rivers, and in ditches. Full to partial sun.
- 🌿 **Height:** Erect, 4-14 feet tall, usually forming dense stands.
- 🌿 **Stem:** Called “culms” are large, hollow, and grow up to 1 inch wide.
- 🌿 **Leaves:** Bluish-green, lanceolate, close together and usually sticking out from stems at a large angle, up to 2 feet long and 1 inch wide.
- 🌿 **Flower:** Clusters ½ - 1 foot long, often purple when young. Usually whitish and fluffy when old.
- 🌿 **Flowering Period:** Late July to October.
- 🌿 **Fruit:** Rarely produces seed but spreads vigorously by rhizomes, often running over the surface of the ground.
- 🌿 **Value:** Provides little food value for wildlife, but is grazed by muskrats. Standing winter stalks offer some cover for wildlife.
- 🌿 **Similar Species:** Sometimes confused with reed canary grass since they both form dense stands at disturbed sites. Reed canary grass (*Phalaris arundinacea*) can be distinguished by its shorter and narrower leaves, spikelets with only one flower, and its shorter height.



How To Distinguish Native From Non-Native *Phragmites*

- 🌿 **Stems:** Non-native stems are typically green, but may have a little purple color along the nodes. Native stems have some chestnut or purple color where leaves are pulled back, exposing the stem. Native stems are often shiny. Black spots often appear on native stems late in the growing season.
- 🌿 **Leaf Collars:** Leaf collars on the non-native variety are always green, while leaf collars on the native variety may be purple.
- 🌿 **Leaf Sheaths:** On fall stems, the leaf sheaths on the non-native variety remain attached. Leaf sheaths on native stems are lost or very loosely attached so leaves drop off the native plants before the introduced plants. This is the best indicator based on phenology (seasonal changes) and morphology that distinguishes native or non-native varieties.



JEWELWEED/SPOTTED TOUCH-ME NOT

Impatiens capensis

- 🌱 **Status:** Native
- 🌱 **Habitat:** Shrub and forested wetlands, edges of lakes, ponds, streams, and rivers.
- 🌱 **Height:** 2-5 feet tall. Often growing in dense stands.
- 🌱 **Stem:** Erect, smooth, slightly branching, hollow, somewhat succulent, slightly translucent.
- 🌱 **Leaves:** Alternate, egg-shaped, toothed margins. On stalks up to 4 inches long. Have a silvery appearance when held under water and appear completely dry upon removal. Leaf size and color of foliage vary with differences in exposure and available moisture.
- 🌱 **Flower:** Few to several dangling orange or orange-yellow three-petaled tubular/funnel-shaped flowers with reddish brown spots and curved spur at end.
- 🌱 **Flowering Period:** June through September.
- 🌱 **Fruit:** Flat, green capsule approximately 1 inch long, which, at maturity, bursts when touched, ejecting dark-brown seeds having a light-blue inner covering.
- 🌱 **Value:** Especially adapted to hummingbird pollination, but bees and butterflies are also important pollinators. The stem “juice” is said to relieve itching from poison ivy.



JOE PYE WEED

Eupatorium maculatum



- 🌿 **Status:** Native
- 🌿 **Habitat:** Marshes, wet meadows, edges of lakes, ponds, streams, and rivers.
- 🌿 **Height:** Up to 6 feet tall. Branched, growing in small to medium-sized colonies.
- 🌿 **Stem:** Stout, smooth, purple or purple-spotted, somewhat rough toward the top, arising from a fibrous root base, growing in clumps.
- 🌿 **Leaves:** Lanceolate, toothed margins, short-stalked with rough surface and large single mid-vein. Up to 8 inches long and 2 ½ inches wide, tapered at the base and tip, in whorls of 3-7.
- 🌿 **Flower:** Small, rose-purple, in dense, flat-topped clusters at the top of the stem and at the ends of the branches.
- 🌿 **Flowering Period:** July through September.
- 🌿 **Fruit:** Angular nutlet with a plume of fine bristles at the top.





PICKERELWEED

Pontedaria cordata

- ✿ **Status:** Native
- ✿ **Habitat:** Marshes, edges of lakes, ponds, streams, and rivers.
- ✿ **Height:** Up to 3 feet tall. Often growing in dense colonies.
- ✿ **Stem:** Upright, stout, smooth, arising from a rhizome, bearing one leaf and one terminal spike.
- ✿ **Leaves:** Basal and alternate, very large, arrowhead to heart-shaped, glossy, with prominent parallel veins, blunt tip, on a spongy leaf stalk.
- ✿ **Flower:** Many, small, tubular, violet-blue flowers approximately 1/2 inch long, on solitary spike with a sheath at the base.
- ✿ **Flowering Period:** July to September.
- ✿ **Fruit:** Small, bladder-like, crested with toothed ridges, containing one seed.
- ✿ **Value:** Seeds are consumed by waterfowl and muskrats. Networks of rhizomes and leaves also offer shade and shelter for fish.





PURPLE LOOSESTRIFE

Lythrum salicaria

- ✚ **Status:** **Non-Native/Exotic, Invasive. Invades wetlands suppressing native species and destroying wildlife habitat. This species is prohibited in New Hampshire.**
- ✚ **Habitat:** Marshes, edges of lakes, ponds, streams, rivers, and in roadside ditches. Full to partial sun.
- ✚ **Height:** 2-6 feet tall.
- ✚ **Stem:** Tall, erect, smooth to slightly-downy. Square, four-sided, almost woody. Root tips giving rise to new arching stems, the plant rapidly spreading.
- ✚ **Leaves:** Opposite to whorled, lanceolate, often with heart-shaped bases somewhat clasping stem sometimes in whorls of threes. Gradually tapering to a point, 3 to 4 inches long and ½ to 1 inch wide.
- ✚ **Flower:** 5-7 purple petals and green hairy sepals held in a dense terminal spike.
- ✚ **Flowering Period:** July through September.
- ✚ **Fruit:** Many-seeded capsule up to 3/8 inch long.
- ✚ **Value:** Little wildlife value. Seeds are low in nutrition, and roots are too woody. The flowers are attractive to insects. They produce nectar and are regularly visited by honeybees.



REED CANARY GRASS

Phalaris arundinacea



- ✿ **Status:** **Non-Native/Exotic, Invasive.** Forms dense stands in disturbed areas where clearing, grading, siltation, filling, or other disruptions have created an opening with moist soil.
- ✿ **Habitat:** Swales, marshes, edges of lakes, ponds, streams, and rivers. Although it is usually a shoreline plant, it can survive in knee-deep water by sprouting “water roots” on the submersed portion of the stem.
- ✿ **Height:** Up to 7 feet tall. Often growing in dense colonies.
- ✿ **Stem:** Erect, stiff; from extensively-creeping rhizomes.
- ✿ **Leaves:** Alternate, erect, grayish-green, open sheath and ligule at the leaf axis. Blades fairly long and narrow (up to 12 inches long and ¾ inches wide).
- ✿ **Flower:** Green to greenish-purple spikelets, single-flowered, lanceolate, dense, and overlapping along the panicle branches. Terminal inflorescence up to 7 inches long, branched and compressed early in the season but opening after fertilization.
- ✿ **Flowering Period:** June through August.
- ✿ **Value:** Low food value. Provides summer cover and habitat for waterfowl at disturbed sites. However, it tends to mat down in winter providing little winter cover for wildlife.
- ✿ **Similar Species:** Sometimes confused with bluejoint grass (*Calamagrostis canadensis*). However, the spikelets of bluejoint are in a loose, open arrangement and the nodes have a bluish to purplish cast.



SOFT-STEMMED BULRUSH

Scirpus validus



- ✚ **Status:** Native
- ✚ **Habitat:** Wetlands, edges of lakes, ponds, streams, and rivers. Usually growing in water less than 5 feet deep. Tends to be found on “muckier” substrate and will grow in stagnant water.
- ✚ **Height:** Usually up to 5 feet, but can grow up to 10 feet tall. Often growing in extensive colonies.
- ✚ **Stem:** Upright, grayish-green, often arching, up to $\frac{3}{4}$ inch thick at the base, arising from stout, reddish rhizomes. Soft, round, tapering to a point.
- ✚ **Leaves:** No apparent leaves, usually grayish-green.
- ✚ **Flowers:** Inconspicuous, many-stalked budlike spikelets covered by reddish-brown scales located immediately below the top of stem. Clusters mostly drooping, but not in higher salinity areas.
- ✚ **Flowering Period:** June into September.
- ✚ **Fruit:** Seed-like nutlet with 4-6 bristles attached to the base.
- ✚ **Value:** Provides habitat for invertebrates and shelter for young fish. Nutlets consumed by a variety of waterfowl, marsh birds, and upland birds. Stems and rhizomes eaten by geese and muskrat. Also provides nesting material and cover for waterfowl, marsh birds, and muskrat.



SWAMP LOOSESTRIFE/WATER WILLOW

Decodon verticillatus



- ❖ **Status:** Native shrub becoming herbaceous toward the tips.
- ❖ **Habitat:** Wetlands, bogs, edges of lakes, ponds, streams, and rivers. Shallow water with muck or peat sediment. Can form floating mats in areas of very soft sediment.
- ❖ **Height:** Up to 5 feet tall.
- ❖ **Stem:** Smooth to slightly-downy, 4-6 sided, the rooting tips giving rise to new arching stems.
- ❖ **Leaves:** Opposite, whorled, lanceolate, gradually tapering to a point, 3-4 inches long and ½ to 1 inch wide, sessile or short-stalked.
- ❖ **Flower:** Pinkish-purple, with 5-7 sepals and 5 petals, forming showy clusters in the axils of the middle to upper leaves.
- ❖ **Flowering Period:** July through August.
- ❖ **Fruit:** Small, brownish capsule with 3-5 partitions; the clusters sometimes persisting above the leaf scars throughout winter.
- ❖ **Value:** The many intertwining arching stems may form sizable clusters at the edges of lakes and sluggish streams or floating bog mats. Wherever a stem touches the water, air-filled, spongy tissue may develop. This tissue buoys the stem so that it may root and form a new arching stem.
- ❖ **Similar Species:** May be confused with purple loosestrife (*Lythrum salicaria*). Swamp loosestrife can be distinguished by the arching stems and showy auxiliary flower clusters.



THREE-WAY SEDGE *Dulichium arundinaceum*



- ✿ **Status:** Native
- ✿ **Habitat:** Marshes, wet meadows, edges of lakes, ponds, streams, and rivers. Extensive beds can be found in shallow (less than 3 feet) water. Grows in a variety of sediment types and can tolerate some turbidity.
- ✿ **Height:** Up to 3 feet tall, solitary or in small groups.
- ✿ **Stem:** Round, hollow, jointed, arising from a horizontal rhizome.
- ✿ **Leaves:** Many, linear, up to 4 inches long and 3/8 inch wide with a conspicuous sheath, the latter closed except at the top. Distinctively 3-ranked.
- ✿ **Flower:** Inconspicuous, flattened, linear, sessile, spikelets in the axils or two-ranked scales of the brownish spikelets, 8-10 along the auxillary stalk.
- ✿ **Flowering Period:** July through October.
- ✿ **Fruit:** Flattened, brownish, seed-like nutlet topped with a beak.



WOOL GRASS

Scirpus cyperinus



- ❖ **Status:** Native
- ❖ **Habitat:** Marshes, wet meadows, edges of lakes, ponds, streams, and rivers.
- ❖ **Height:** Up to 5 feet tall; growing in small groups.
- ❖ **Stem:** Erect, robust, round to triangular, especially at the base.
- ❖ **Leaves:** Elongate, from base of stem, the leaves grow up to 2 feet long. Leaves immediately below the flower are in clusters of 3-5 and may reach 5 inches long and droop at the tips.
- ❖ **Flower:** Many, cluster of spikelets (6-12) at ends of drooping stems. Flower clusters up to 12 inches long, much branched.
- ❖ **Flowering Period:** August through September.
- ❖ **Fruit:** Whitish, seed-like nutlet with bristles much longer than the scales attached to the base; the bristles impart the wooly appearance to the spikelets.





Ferns



CINNAMON FERN

Osmunda cinnamomea

- ❖ **Status:** Native
- ❖ **Habitat:** Shrub and forested wetlands, edges of lakes, ponds, streams, and rivers. Often grows near somewhat similar and related interrupted fern (*Polystichum aristichoides*).
- ❖ **Height:** Up to 3 feet tall.
- ❖ **Stem:** Erect, stout, smooth, green, and covered with cinnamon-colored wooly stalk.
- ❖ **Leaves:** Sterile fronds up to 3 feet high, erect to slightly arched, lance-shaped with 20+ opposite lanceolate leaflets. Fertile fronds do not persist through the summer whereas vegetative fronds remain until first frost.
- ❖ **Reproduction:** Club-like fertile frond with groups of spore cases on leaflets that hug the main axis.
- ❖ **Fruiting Period:** Spring.





OSTRICH FERN

Pteretis pensylvanica

- ✿ **Status:** Native
- ✿ **Habitat:** Shrub and forested wetlands, edges of lakes, ponds, streams, and rivers.
- ✿ **Height:** Up to 6 feet tall; forming tussocks or clumps.
- ✿ **Stem:** Stout, naked for up 1 foot from the base, green, flattened and black at the base, covered with papery brown scales. Arising from a forking, shallowly-embedded rhizome and giving rise to stout, black, scaly runners.
- ✿ **Leaves:** The sterile frond very different from the fertile frond, forming circles, gradually narrowed at the base and abruptly so to the tip. Fertile frond up to 2 feet tall and 2 inches wide, naked for approximately half its length, the naked portion shiny brown, the crowded, spreading or ascending branches often overlapping or twisted, light green at first, turning dark green and eventually brown.
- ✿ **Reproduction:** Leaf segments with spore cases beneath, which have become rolled into small, hard berry-like structures, joined along the branches of the fertile frond appearing July-August and persisting over winter.
- ✿ **Fruiting Period:** Spring and early summer.
- ✿ **Similar Species:** Cinnamon fern (*Osmunda cinnamomea*). Ostrich fern may be distinguished by the gradually narrow base, and papery scales rather than cinnamon-colored pubescence on the stalk.





ROYAL FERN *Osmunda regalis*

- ✚ **Status:** Native
- ✚ **Habitat:** Shrub and forested wetlands, edges of lakes ponds, streams, and rivers.
- ✚ **Height:** Up to 5 feet tall. Growing in scattered groups.
- ✚ **Stem:** Somewhat stout, naked for approximately $\frac{1}{2}$ its length, greenish or reddish, arising from a stout, creeping rhizome.
- ✚ **Leaves:** A frond with 5-7 pairs of nearly opposite, oblong, ascending divisions. The lowest pair slightly shorter than the others, each division divided into finely toothed, oblong, blunt alternate segments, 10-14 on each side. Fertile frond terminated by a panicle appearing as a dense cluster of light brown structures.
- ✚ **Reproduction:** Spore cases clustered along short, naked leaf segments in a terminal panicle and often at the tips of some of the divisions. One of several ferns that produce their spores on modified leaflets, not on the underside of the fronds.



SENSITIVE FERN *Onoclea sensibilis*

- 🌿 **Status:** Native
- 🌿 **Habitat:** Shrub and forested wetlands, edges of lakes, ponds, streams, and rivers.
- 🌿 **Height:** Up to 3 feet tall. Growing solitary or scattered.
- 🌿 **Stem:** Robust, erect, stout, naked for nearly ½ its length, arising from a creeping rhizome.
- 🌿 **Leaves:** The sterile frond very different from the fertile frond. Sterile fronds up to 3 feet tall, the blade with up to 16 pairs of wide segments having wavy margins. Fertile fronds shorter, the berry-like structures clustered in stiffly erect divisions, the entire structure appearing spike-like.
- 🌿 **Reproduction:** Leaf segments with spore cases beneath, which have become rolled into small, hard, black, berry-like structures appearing July through August and persisting over winter.
- 🌿 **Fruiting Period:** June into October.





Woody Shrubs

NORTHERN ARROW-WOOD

Viburnum recognitum

- ✚ **Status:** Native
- ✚ **Habitat:** Shrub and forested wetlands, edges of lakes, ponds, streams, and rivers.
- ✚ **Height:** Up to 15 feet tall, forming thickets.
- ✚ **Bark:** Smooth, gray. White pith.
- ✚ **Twigs:** Brownish-gray, hairless, highly branched, long, straight, slender, arrow-like, smooth.
- ✚ **Buds:** Reddish-brown with 2 pairs of scales. Opposite pointed, approximately 1/4 inch long, rounded scales with fringe of minute hairs along the borders.
- ✚ **Leaves:** Opposite, egg-shaped to round, with saw-like coarse teeth, 1-2 inches long and 3 inches wide, tapering to a point, with very prominent smooth veins.
- ✚ **Flower:** Numerous, small, white-petaled on short stalks in a somewhat dense terminal flat cluster, white 2-4 inches across.
- ✚ **Flowering Period:** June through July.
- ✚ **Fruit:** Fleshy, blue-black, berry-like, approximately 1/3 inch wide, containing a flattened seed, appearing in August.



BUTTONBUSH

Cephalanthus occidentalis



- ✚ **Status:** Native
- ✚ **Habitat:** Shrub and forested wetlands, edges of lakes, ponds, streams, and rivers.
- ✚ **Height:** Up to 12 feet tall; typically 3-5 feet tall.
- ✚ **Bark:** Young: smooth, grayish; Older: flaky, grayish-brown. Light-brown pith.
- ✚ **Twigs:** Slender, round or angled, grayish-brown to purplish marked with light, elongated dots.
- ✚ **Buds:** Small in depressed areas, surrounded by bark.
- ✚ **Leaves:** Opposite or whorled, in whorls of 3-4. Oblong to oval, 3-6 inches long, smooth, no teeth, broad at the base, pointed at tip, shiny dark green above, lighter green and slightly downy beneath. Short stalks.
- ✚ **Flower:** Tubular, creamy white, crowded in dense, spherical round balls, 1- 1 ½ inch wide, long stalked, often in groups of 3. Ripe heads brownish, fragrant.
- ✚ **Flowering Period:** July through August.
- ✚ **Fruit:** Small, triangular-shaped capsules, greenish in ball-like heads like the flowers. Persist into winter.
- ✚ **Value:** Noted for its ability to withstand flood conditions. The fruits have some appeal to wildlife, especially mallard ducks.



ELDERBERRY/BLACK-BERRIED ELDER

Sambucus canadensis



Elderberry showing fruit

- ✿ **Status:** Native
- ✿ **Habitat:** Shrub and forested wetlands, edges of streams and rivers.
- ✿ **Height:** Up to 12 feet tall; often forming dense thickets.
- ✿ **Bark:** Inner bark green.
- ✿ **Twigs:** Pale yellow-brown to light-brown with numerous large, raised bumps. Ill-smelling when bruised. Fluted or squared pith very thick, white, and soft.
- ✿ **Buds:** Small, ovoid to oblong, covered with brownish scales.
- ✿ **Leaves:** Opposite, pinnately compound, with 5 to 11 leaflets, usually 7. Lanceolate to ovate, abruptly narrowing at the tip. Sharply-toothed. Lower leaflets often 3-parted. Smooth above, pale, smooth or downy on veins beneath.
- ✿ **Flower:** Flat-topped clusters of small, white, nicely-scented flowers with 5 white petals. The cluster up to 6 inches wide, generally with 5 main branches.
- ✿ **Flowering Period:** Late June through July.
- ✿ **Fruit:** Juicy, purplish-black berries in flat-topped clusters containing many seeds, appearing late August to early October.



Elderberry showing flowers

GLOSSY BUCKTHORN

Rhamnus frangula



- ✚ **Status:** **Non-Native/Exotic, Invasive. This species is prohibited in New Hampshire.**
- ✚ **Habitat:** Generalist. Full-sun or shade, moist or dry, acidic or basic soils. Highly shade tolerant. Woodland borders, forested wetlands, floodplain forests.
- ✚ **Height:** Up to 20 feet tall.
- ✚ **Twigs:** Grayish with whitish lenticels.
- ✚ **Buds:** Naked, downy, up to ¼ inch long.
- ✚ **Leaves:** Alternate, oblong, 4-5 inches long by 3-4 inches wide, on whorled stem. Long growing season; leafing out in May and holding its leaves into November.
- ✚ **Flower:** Small, greenish-white, in small clusters in the leaf axis.
- ✚ **Flowering Period:** May through September. Flowers and fruits continuously from May through September. Plants often display buds, flowers, immature fruit, and mature fruit simultaneously.
- ✚ **Fruit:** Berry with 2-3 pits, approximately ¼ inch wide, turning from green to red and eventually blue-black. Often all three colored berries are on the plant at the same time. Sometimes difficult to recognize in a forested situation, due to its non-descript appearance, but easily recognized July through September due to masses of berries.





HIGHBUSH BLUEBERRY

Vaccinium corymbosum

- ✚ **Status:** Native.
- ✚ **Habitat:** Shrub and forested wetlands, rich woods, edges of lakes, ponds, rivers, and streams.
- ✚ **Height:** Up to 15 feet tall; often growing in clumps.
- ✚ **Bark:** Rough, brown. Stem and larger branches shreddy.
- ✚ **Twigs:** Yellowish green, becoming pale red. Some are reddish brown, on other bushes yellow. Covered with small warty dots, zigzagged or angled.
- ✚ **Buds:** Flower buds red, plump, pointed; the scales with a spine-like point. Leaf buds smaller, two outer scales with hair-like point.
- ✚ **Leaves:** Alternate, elliptic, green on both sides, no teeth on margin. Lower side slightly wooly on the nerves. Pointed at both ends. Up to 3 inches long and 1 ½ inch wide. Deep red in autumn.
- ✚ **Flower:** Cylindrical, white or pink, up to ½ inch long and ¼ inch wide in dense terminal or lateral clusters.
- ✚ **Flowering Period:** April through June when leaves are only half grown.
- ✚ **Fruit:** Blue-black berry, up to ½ inch wide with whitish bloom, sweet, in clusters.



HOBBLEBUSH

Viburnum alnifolium



- ✿ **Status:** Native.
- ✿ **Habitat:** Cool, moist ravines, edges of rivers and streams.
- ✿ **Height:** Up to 10 feet tall.
- ✿ **Bark:** Light brown, with wavy grooves.
- ✿ **Twigs:** Tough, stout, olive brown to light purplish brown. Coated with rusty brown hairs toward the tip.
- ✿ **Buds:** Large, long, in pairs, light-brown covered with velvety fuzz. Flower buds rounded. Occur only at tips of twigs.
- ✿ **Leaves:** Very large, 4-8 inches long. Almost round, finely toothed, heart-shape at base. Hairy beneath, rusty, veins much branched. Stalks with brownish hairs.
- ✿ **Flower:** Large white clusters with 5 petals, appearing before leaves are fully grown.
- ✿ **Flowering Period:** May through June.
- ✿ **Fruit:** Red berries turning black. Stones with a groove on each edge.
- ✿ **Similar Species:** Viburnums likely to be confused with dogwoods. Viburnum leaves are nearly always toothed, or lobed, while dogwood leaves are smooth on the margins (entire) and veins are parallel.



HONEYSUCKLE

Lonicera spp.

(*L. morrowii*, *L. tatarica*, *L. maackii*)



- ✚ **Status:** **Non-Native/Exotic, Invasive. These species are prohibited in New Hampshire.**
- ✚ **Habitat:** Fields, roadsides, fence-rows, hedge-rows, edges of woods.
- ✚ **Height:** 10 to 15 feet tall.
- ✚ **Bark:** Tan to brown, shredded in appearance.
- ✚ **Twigs:** Generally glabrous, thornless.
- ✚ **Buds:** Blunt to acute.
- ✚ **Leaves:** Opposite, entire, oblong to egg-shaped, 1-5 inches long.
- ✚ **Flower:** 5-lobed, tubular, sometimes fragrant, growing in leaf axils, white to yellow.
- ✚ **Fruit:** Red, rarely yellow, juicy, few-seeded berry. July through September.
- ✚ **Flowering Period:** May through June.

✚ **Morrow's Honeysuckle** *Lonicera morrowii*

Leaves and young twigs densely downy. Leafy bracts beneath flowers not glandular. Leaves broadest below the middle. Flowers white fading to yellow.

✚ **Tartarian Honeysuckle** *Lonicera tatarica*

Undersides of leaves and young twigs are hairless. Flowers usually pink-red. Only species that has hollow pith.

✚ **Amur Honeysuckle** *Lonicera maackii*

Upper surface of leaves are shiny. Bark is gray or tan and exfoliates somewhat in vertical strips. Flowers white fading to yellow.





JAPANESE KNOTWEED

Polygonum cuspidatum

- ✿ **Status:** **Non-Native/Exotic, Invasive. Fast growing, aggressive, easily spreads and reproduces vegetatively. This species is prohibited in New Hampshire.**
- ✿ **Habitat:** Woodland sites, open spaces, ditches, roadsides, edges of streams and rivers.
- ✿ **Height:** Up to 10 feet tall.
- ✿ **Twigs:** Greenish, hollow, jointed, similar to bamboo. Stems often persist into winter.
- ✿ **Leaves:** Alternate, large, untoothed, broadly ovate, 3-7 inches long with pointed tips and square bases.
- ✿ **Flower:** Many small, whitish, growing in slender, finger-like clusters in the leaf axils.
- ✿ **Flowering Period:** August to September.
- ✿ **Fruit:** White, papery, wind-dispersed, x-shaped in cross-section.



MALEBERRY *Lyonia ligustrina*



- ✿ **Status:** Native
- ✿ **Habitat:** Shrub and forested wetlands, rich woods, gentle slopes, edges of streams and rivers.
- ✿ **Height:** Up to 10 feet tall. Often forming thickets.
- ✿ **Bark:** Gray, light-colored, shreddy, shaggy. Younger bark appearing slightly hairy, older bark gray with white lenticels.
- ✿ **Twigs:** Yellow-brown to ash-gray mottled with black. Flowering twigs leafless.
- ✿ **Buds:** No terminal bud. Flattened, red, ovoid, approximately 1/8 inch long, pointed with a single reddish scale.
- ✿ **Leaves:** Alternate, elliptic to oblong, stalked, up to 3 inches long, pointed at both ends, minutely toothed. Rough above, slightly-hairy beneath.
- ✿ **Flower:** Small, globose-shaped, nodding, white, about 1/8 inch wide, up to 50 in a cluster; clusters up to 6 inches long.
- ✿ **Flowering Period:** May through July.
- ✿ **Fruit:** Greenish-gray to brown, small, globose capsules with 5 partitions, up to 1/4 inch long. No larger than flower. Crowded in groups on the stem, persisting through winter. Dry, brown pods, resembling blueberries.
- ✿ **Similar Species:** Highbush blueberry (*Vaccinium corymbosum*). Maleberry can be distinguished by its flattened red buds, lateral rather than terminal clusters, and by capsules of fruit instead of berries.





MEADOWSWEET

Spiraea latifolia

- ✿ **Status:** Native
- ✿ **Habitat:** Marshes, wet meadows, edges of lakes, ponds, streams, and rivers.
- ✿ **Height:** 2-3 feet tall; forming large, dense colonies.
- ✿ **Bark:** Thin, peeling in filmy layers.
- ✿ **Twigs:** Smooth, slender, light reddish-brown to purple; more or less angled. Unbranched (except occasionally toward the top where branching may occur).
- ✿ **Buds:** Many, small, ovoid, smooth, with several scales.
- ✿ **Leaves:** Alternate, thin, narrow, short-stalked, oblong, tapering to the base with toothed margins and pointed to round tips. Up to 3 inches long and 1 ½ inches wide, thin, smooth on both surfaces.
- ✿ **Flower:** Pyramid clusters of white to pinkish, 5-parted small flowers occurring at tip of stem.
- ✿ **Flowering Period:** July into September.
- ✿ **Fruit:** Small, hard, smooth, cluster of 5-6 tiny pods, persisting over winter in the inflorescence, giving it a dark-brown color.



MULTIFLORA ROSE

Rosa multiflora



- ✿ **Status:** **Non-Native/Exotic, Invasive. This species is prohibited in New Hampshire.**
- ✿ **Habitat:** Generalist. Variety of soil, moisture and light conditions.
- ✿ **Height:** Up to 9 feet tall. Shrubby, arching.
- ✿ **Bark:** Green. Older stems turn woody.
- ✿ **Twigs:** Long, arching, with stiff re-curved thorns, tips root to form new plants.
- ✿ **Leaves:** Alternate, pinnately compound, 7-9 toothed leaflets, each leaflet about 1 inch long. Fringed stipule at the base of leaf stem.
- ✿ **Flower:** Fragrant, white or occasionally pink, up to 1 ½ inch wide, 5-petalled, arranged in dense clusters. Persist into winter.
- ✿ **Flowering Period:** May through June.
- ✿ **Fruit:** Small, round, hard, red berry called a “hip”. Smallest hip of any rose in New England; persists into winter.
- ✿ **Similar Species:** Multiflora rose can be distinguished from other roses by the presence of a fringed stipule on the leaf petiole.



NORTHERN WILD RAISIN/ WITHEROD VIBURNUM

Viburnum cassinoides



- ✚ **Status:** Native
- ✚ **Habitat:** Shrub and forested wetlands, valleys, gentle slopes, edges of streams and rivers.
- ✚ **Height:** Up to 10 feet tall; usually up to 7 feet tall.
- ✚ **Bark:** Smooth, grayish brown.
- ✚ **Twigs:** Slender, long, flexible, dull, pale grayish to light-brown. Slightly hairy. Somewhat angled, with indistinct lenticels.
- ✚ **Buds:** Covered by single pair scales. Terminal buds long, yellow, or golden. 2 light-brown scales split curved. Flower buds large and flask-shaped.
- ✚ **Leaves:** Opposite, lanceolate to ovate, loosely toothed, up to 4 inches long on short stalks, tapering to an abrupt point. Dull green above, leathery.
- ✚ **Flower:** Small, many, white, 5-lobed, in short-stalked flat-topped clusters, at the tips of the twigs.
- ✚ **Flowering Period:** May through July.
- ✚ **Fruit:** Fleshy, blue-black berry-like, approximately 1/4 inch wide, containing a flat seed. Dull red as maturing.



SHADBUSH/SERVICEBERRY

Amelchier canadensis



- ✚ **Status:** Native
- ✚ **Habitat:** Forested wetlands, floodplains, rich woods, edges of streams and rivers.
- ✚ **Height:** Up to 25 feet tall; usually growing in clusters.
- ✚ **Bark:** Gray, smooth, thin, older trees with vertical fissures, separating smooth flat areas.
- ✚ **Twigs:** Rancid taste or small (slight taste of bitter almonds). Slender, grayish, often covered by a gray skin, smooth. Lenticels are scattered minute dots.
- ✚ **Buds:** Terminal buds long, narrow; greenish yellow or purple.
- ✚ **Leaves:** Alternate, oblong, finely-toothed, broadest above the middle. Veins curved. When half grown with white felt or wooly hairs beneath. Up to $\frac{3}{4}$ inch long, rounded at the tip and base.
- ✚ **Flower:** Many medium-sized, 5-petalled, white flowers, approximately $\frac{3}{4}$ inch wide, on stalks, in clusters appearing when leaves are half grown.
- ✚ **Flowering Period:** April through June.
- ✚ **Fruit:** Dark-purple to black berries.



SHEEP LAUREL/LAMBKILL

Kalmia angustifolia



- ✚ **Status:** Native
- ✚ **Habitat:** Shrub and forested wetlands, edges of lakes, ponds, streams, and rivers.
- ✚ **Height:** Up to 3 feet tall; usually growing in clumps.
- ✚ **Bark:** Reddish brown.
- ✚ **Twigs:** Round in cross section. Pale brown, smooth.
- ✚ **Buds:** Naked, no scales, or only 2 showing.
- ✚ **Leaves:** Evergreen. Occasionally opposite but usually in whorls of 3. Elliptic to oblong, on very short stems, crowded on the branch opposite in threes. Bright green above, pale or whitened beneath. Both surfaces smooth.
- ✚ **Flower:** Deep pink to reddish-purple, small, 5-lobed, approximately 1 ½ inch wide, in clusters among the leaves.
- ✚ **Flowering Period:** May through July.
- ✚ **Fruit:** Small, brownish, globose capsule with 5 partitions in clusters that persist over winter.



SILKY DOGWOOD

Cornus amomum



- ✚ **Status:** Native
- ✚ **Habitat:** Shrub and forested wetlands, edges of streams and rivers.
- ✚ **Height:** Up to 10 feet tall; forming dense thickets.
- ✚ **Twigs:** Much branching, lower portion of the stem light brown, upper portions becoming streaked with red. One- and two-year old branches completely red, velvety. Twigs moderate to slender, with spongy piths that are chocolate-brown.
- ✚ **Buds:** Smooth, hairy.
- ✚ **Leaves:** Opposite, ovate to elliptic, rounded at base, with pointed tips. Having veins branching off midvein that follow up the smooth (entire) leaf margin without reaching edge. Up to 5 inches long and half as wide, rounded to somewhat wedge-shaped at the base and abruptly pointed at the tip, pubescent beneath, on short to moderate stalks, turning red in autumn.
- ✚ **Flower:** Many small, white, 4-petalled, in broad, flat-topped clusters at the tips of branches. Clusters up to 3 inches wide.
- ✚ **Flowering Period:** May through July.
- ✚ **Fruit:** Blue or blueish-white berries.



SPECKLED ALDER

Alnus rugosa



- ✚ **Status:** Native
- ✚ **Habitat:** Shrub and forested wetlands, edges of lakes, ponds, streams, and rivers.
- ✚ **Height:** Up to 25 feet tall. Often branching from the base.
- ✚ **Bark:** Brown, with whitish horizontal lenticels (dots).
- ✚ **Twigs:** Olive-brown to reddish brown, smooth, downy. Pith triangular, greenish.
- ✚ **Buds:** Stalked, reddish, covered by 2-3 scales equal in length, coated with grayish or brownish down, no terminal bud.
- ✚ **Leaves:** Alternate, oval or rounded 2-4 inches long. Broadest below middle. Doubly toothed or wavy. Green above, pale beneath. Leaf base rounded or heart-shaped, not sticky, cross veins present. Up to 6 inches long and 3 inches wide.
- ✚ **Flower:** Develop long before the leaves. Male catkins long, finger-like, drooping. Female catkins upright in clusters, stalked, resembling a small pine cone, arching, appearing below male.
- ✚ **Flowering Period:** April through June; before leaf-out.
- ✚ **Fruit:** Female catkins ripening into ½ inch cylindrical cones, persistent in winter.
- ✚ **Comments:** Distinguishing features are the conspicuous white lenticels on the trunk and on the twigs, the short, thick stalks of the “cones”, and the conspicuous net venation of the leaves. In winter, the immature female spikes droop.





SPICEBUSH

- ✚ **Status:** Native
- ✚ **Habitat:** Forested wetlands, floodplains, rich woods, edges of streams and rivers.
- ✚ **Height:** Up to 10 feet tall.
- ✚ **Bark:** Smooth, grayish-brown.
- ✚ **Twigs:** Older portions with smooth, gray-brown bark while younger growth is green with white lines and specks.
- ✚ **Buds:** Leaf buds small, pointed. Flower buds larger, stalked. Spherical, arranged on one side of a leaf bud above the scar.
- ✚ **Leaves:** Alternate, obovate to ovate, somewhat pointed, up to 4 inches long and 2 inches wide.
- ✚ **Flower:** Small, yellow. Male and female occur in clusters on separate plants.
- ✚ **Flowering Period:** April through May.
- ✚ **Fruit:** Fleshy, red and berry-like, up to ½ inch long, containing one large seed.



STEEPLEBUSH

Spiraea tomentosa



- ✿ **Status:** Native
- ✿ **Habitat:** Wet meadows, marshes, shrub wetlands, edges of lakes, ponds, streams, and rivers.
- ✿ **Height:** Up to 3 ½ feet tall.
- ✿ **Bark:** Thin, hairy, peeling, shredding into strips.
- ✿ **Buds:** Buds covered with wool. No terminal bud.
- ✿ **Leaves:** Alternate, simple, toothed, up to 2 inches long, white or woolly beneath with brownish, rusty, or tawny hairs.
- ✿ **Flower:** Small, 5-petaled deep pink or rose colored, in dense, steeple-like terminal inflorescence up to 6 inches long.
- ✿ **Flowering Period:** July into September.



SWEET PEPPERBUSH

Clethera alnifolia



- ✿ **Status:** Native
- ✿ **Habitat:** Shrub and forested wetlands, edges of lakes, ponds, streams, and rivers.
- ✿ **Height:** Up to 10 feet tall.
- ✿ **Bark:** Dark grayish or blackish. Branches of previous year with shreddy/flaky bark.
- ✿ **Twigs:** Slender, round and slightly downy on new twigs. Pith large and white.
- ✿ **Buds:** Small and obscure except terminal, which is downy, large, and pointed. Terminal bud large and pointed.
- ✿ **Leaves:** Alternate, egg-shaped to oblong, small, broadest above middle, sharply-toothed except at base (entire). Straight-veined; both sides smooth and green, abruptly blunt-pointed. Up to 4 ½ inches long and 1 ½ inches wide.
- ✿ **Flower:** Many small, 5-petaled, fragrant, white flowers occur on terminal spike.
- ✿ **Flowering Period:** July through September.
- ✿ **Fruit:** Small, tan, globose capsule, each with 3 hairy partitions, resembling peppercorns, persisting into winter.
- ✿ **Comments:** Forms sizable patches. Dry fruiting capsules persist long after flowering and help identify this plant in winter.



WINTERBERRY HOLLY/BLACK ALDER

Ilex verticillata



- ❧ **Status:** Native
- ❧ **Habitat:** Shrub and forested wetlands, edges of lakes, ponds, streams, and rivers.
- ❧ **Height:** Up to 10 feet tall.
- ❧ **Bark:** Gray, smooth.
- ❧ **Twigs:** Slender, dark purple-gray with many small lenticels.
- ❧ **Buds:** Tiny, 1/16 long, blunt at tip, diverging from the twig. Crowded, upper buds larger. Terminal bud present.
- ❧ **Leaves:** Alternate, ovate, thick, dull-green above, downy beneath, coarse-toothed, veins prominent, Broadest at or above the middle, pointed at both ends.
- ❧ **Flower:** Very small, greenish or yellowish white. Male and female on separate plants, 6-8 petals, in clusters seated directly on stem, 1/4 inch in diameter of very short stalks.
- ❧ **Flowering Period:** May through August.
- ❧ **Fruit:** Bright red, berry-like with 3-5 bony nuts borne singly or in clusters, approximately 1/4 inch wide containing several seeds, persisting into winter.
- ❧ **Value:** Extremely showy in late fall and early winter when covered with their bright red fruit, these shrubs are either male or female. Birds are readily attracted to them.



WITCH HAZEL *Hamamelis virginiana*



- ✿ **Status:** Native
- ✿ **Habitat:** Shrub and forested wetlands, edges of lakes, ponds, streams, and rivers.
- ✿ **Height:** Up to 30 feet tall.
- ✿ **Bark:** Mottled, light-brown to gray, smooth to scaly.
- ✿ **Twigs:** Zigzag, smooth to slightly hairy. Short shoots light orange brown, with rusty or gray hairs. Some brown warts, but lenticels indistinct.
- ✿ **Buds:** Flattened, with rusty brown hairs. Terminal bud stalked, curved, or sickle-shaped.
- ✿ **Leaves:** Variable, obliquely rounded, wavy, lopsided, oval, toothed in shallow rounded lobes. Main veins prominent, 5-7 nerves. Green both sides, one-sided at base.
- ✿ **Flower:** Bright yellow, crinkled, curving petals, persisting into winter, remaining attached to twig.
- ✿ **Flowering Period:** August into November.
- ✿ **Fruit:** Woody, hairy, light-brown, 2-seeded pod, with 4 well-spaced curved points, splitting open and ejecting black seeds forcibly, ripening a year after flowers. Open pods remain on stem.





Climbing Vines

CLIMBING/ORIENTAL BITTERSWEET *Celastrus orbiculatus*



- ✿ **Status:** **Non-Native/Exotic, Invasive. Very aggressive, climbs up and over trees and chokes them. This species is prohibited in New Hampshire.**
- ✿ **Habitat:** Disturbed areas, roadsides, fields, forests, and edges of streams and rivers.
- ✿ **Height:** 40-65 feet long. Deciduous woody vine.
- ✿ **Stem:** Tanish, furrowed.
- ✿ **Leaves:** Alternate, ovate, blunly toothed, 3-4 inches long, tapered at the base.
- ✿ **Flower:** Small, greenish, in clusters in the leaf axils.
- ✿ **Flowering Period:** April through May.
- ✿ **Fruit:** Bright-yellow splitting open to reveal showy, orange/red fruit. Used ornamentally in wreathes.



POISON IVY

Toxicodendron radicans



Poison ivy showing fruit.

- ✿ **Status:** Native.
- ✿ **Habitat:** Generalist. Variety of soil, moisture and light conditions. Found in recent clear-cuts.
- ✿ **Height:** Erect deciduous shrub, trailing vine, or climbing plant. Shrub can grow up to 6 ft. tall, but this plant is taller as a vine.
- ✿ **Leaves:** Long-stalked compound leaves divided into three leaflets, each leaflet having a longer stalk than the side leaflets.
- ✿ **Flowers:** Small yellowish flowers with five petals occur on lateral clusters.
- ✿ **Flowering Period:** May through July.
- ✿ **Fruit:** Greenish to grayish-white berries, lacking hairs. Produced in late summer. Can persist throughout winter.

CAUTION!

**TOUCHING OR BURNING ANY PART OF THIS PLANT
CAN CAUSE SEVERE SKIN IRRITATION.**



Poison ivy as a tree-climbing vine.



Poison ivy in autumn.

RIVERBANK GRAPE

Vitis riparia



- ✿ **Status:** Native.
- ✿ **Habitat:** Forested wetlands, floodplains, edges of streams and rivers.
- ✿ **Height:** Up to 60 feet tall.
- ✿ **Bark:** Reddish-brown in loose strips. Pith with thin, firm tissue.
- ✿ **Leaves:** Alternate, simple, coarse-toothed, up to 7 inches long with usually 3-5 lobes and narrow-pointed leaves.
- ✿ **Flowers:** Inconspicuous, in branched clusters.
- ✿ **Flowering Period:** May through July.
- ✿ **Fruit:** Purplish-black to black grapes, up to 1/2 inch wide with whitish, waxy covering.
- ✿ **Similar Species:** Forest grape (*Vitis vulpina*) occurs in similar habitats but its leaves have broad teeth and are not usually lobed; grapes are black lacking waxy coating.



VIRGINIA CREEPER

Parthenocissus quinquefolia



- ✚ **Status:** Native
- ✚ **Habitat:** Wide range of conditions; dry sandy sites, moist nutrient-rich soil, shade, sun.
- ✚ **Stem:** Woody stem persists
- ✚ **Leaves:** Alternate, palmately compound, with 3-7 but usually 5 leaflets. Leaflets 6-12 centimeters long with toothed margins. Turn deep-red in the fall
- ✚ **Flower:** Inconspicuous green-white.
- ✚ **Fruit:** Small, blue-black berries, appearing in autumn.
- ✚ **Comments:** Climbs by tendrils that have oval adhesive disks at their tips.
- ✚ **Similar Species:** Poison ivy (*Toxicodendron radicans*) has compound leaves with 3 leaflets; the terminal leaflet is attached to a short-stalk. However, poison ivy climbs by aerial roots not by adhesive disks.





The Canopy: Trees

AMERICAN BASSWOOD/LINDEN

Tilia americana



- ✿ **Status:** Native
- ✿ **Habitat:** Rich woods, valleys, gentle slopes.
- ✿ **Height:** Up to 100 feet tall.
- ✿ **Bark:** Smooth, gray, ridged when old.
- ✿ **Twigs:** Alternate, greenish-gray, zigzag, stout, smooth or downy.
- ✿ **Buds:** Reddish-brown, ½ inch long, no terminal bud. Lopsided.
- ✿ **Leaves:** Alternate, simple, large, up to 8 inches long, sharply toothed. Unequally heart-shaped at base under surface with tufts of hair in corners of lateral veins.
- ✿ **Flowers:** Approximately ½ inch across, 5 cream-colored, fragrant yellow petals.
- ✿ **Flowering Period:** Early summer.
- ✿ **Fruit:** Stalked cluster of small, pale green nuts, attached to a leafy wing.

AMERICAN BEECH

Fagus grandifolia

- ✿ **Status:** Native
- ✿ **Habitat:** Rich woods, uplands, well-drained lowlands.
- ✿ **Height:** Up to 90 feet tall.
- ✿ **Bark:** Smooth, light blue-gray, granular, does not change as tree grows older.
- ✿ **Twigs:** Alternate, slender, greenish-brown, hairy.
- ✿ **Buds:** Slender, sharp-pointed, approximately ¾ inch long, chestnut brown with overlapping scales.
- ✿ **Leaves:** Alternate, simple, egg-shaped, pointed, toothed with parallel veins terminating in teeth. Shiny, papery- smooth, up to 5 inches long. Dry leaves remain on tree in winter. Yellow in autumn.
- ✿ **Flowers:** Inconspicuous, slender catkins in a rounded head, both sexes occur on the same tree.
- ✿ **Flowering Period:** April through May.
- ✿ **Fruit:** Prickly, 4-valved fruit capsule bearing 2 triangular nuts. Nut is sweet and edible.



AMERICAN HORNBEAM/ IRONWOOD/BLEUE BEECH

Carpinus caroliniana



- ✚ **Status:** Native
- ✚ **Habitat:** Rich woods, forested wetlands, edges of streams and rivers.
- ✚ **Height:** Up to 40 feet tall.
- ✚ **Bark:** Smooth, gray-green, furrowed, fluted (muscular), wavy.
- ✚ **Twigs:** Slender, dark reddish-brown, shiny and smooth or slightly hairy.
- ✚ **Buds:** Ovate, reddish brown, angled, scaly.
- ✚ **Leaves:** Alternate, simple, oblong, sharply and finely doubly-toothed margins, up to 4 inches long and 2 inches wide, entirely smooth above, slightly downy beneath. Orange or scarlet in autumn.
- ✚ **Flowers:** Very small male and female flowers occur in separate spikes. Male catkins 1 inch; female small, appearing with leaves.
- ✚ **Flowering Period:** April through May; before leaf-out.
- ✚ **Fruit:** Nutlet in the axil of a 3-lobed, leaf-like bract, the bracts clustered in a loose, terminal spike up to 2 inches long.

BLACK BIRCH/SWEET BIRCH

Betula lenta

- ✚ **Status:** Native
- ✚ **Habitat:** Rich woods.
- ✚ **Height:** Up to 60 feet tall.
- ✚ **Bark:** Smooth, dark brown, not peeling. Long horizontal lenticels resembling cherry. Older trees with very dark thick plates.
- ✚ **Twigs:** Smooth, slender, light reddish brown with very fine horizontal lines. Very strong wintergreen odor and taste.
- ✚ **Buds:** Sharp, reddish brown, long terminal bud absent on long shoots. Bud scales downy on margins.
- ✚ **Leaves:** Alternate, simple, heart-shaped, sharply double-or single-toothed, smooth above with tufts of white hair on the veins beneath, dull, dark green appear opposite on shoots. Very strong wintergreen odor and taste.
- ✚ **Flower:** Male and female occur in separate catkins on the same tree; pre-formed male catkins present during the winter.
- ✚ **Flowering Period:** April through May.
- ✚ **Fruit:** Catkins cylindrical, short, scales smooth approximately 1 inch long.



BLACK CHERRY

Prunus serotina



- ✚ **Status:** Native
- ✚ **Habitat:** Rich woods, on many sites.
- ✚ **Height:** Up to 60 feet tall.
- ✚ **Bark:** Dark reddish-brown, smooth, with narrow, horizontal lenticels on young trees, becoming roughened and scaly on older trees. Inner bark rancid smelling and tasting. Resembles black birch.
- ✚ **Twigs:** Slender, reddish-brown, often with a peeling grayish skin. Rancid smelling. Often has black knot swellings on branches, with narrow, lenticels.
- ✚ **Buds:** Bright, light reddish-brown, 4 scales appear as none. Terminal bud larger than laterals.
- ✚ **Leaves:** Alternate, simple, elliptic, approximately 4 inches long and 1 inch wide. Finely toothed, smooth and shiny above, teeth turning inward. Brown wool on 1/3 of midrib beneath. Yellow to brown in autumn.
- ✚ **Flower:** White, 5-petalled elongated clusters occurring when leaves are 1/2 grown, in clusters at the ends of twigs, up to 4 inches long.
- ✚ **Flowering Period:** April through May.
- ✚ **Fruit:** Edible cherries, 1/3 to 1 inch wide, dark reddish-purple, becoming black with small stone. Appearing June-October.

BOX ELDER/ASH-LEAVED MAPLE

Acer negundo

- ✚ **Status:** Native
- ✚ **Habitat:** Forested wetlands, lowlands, floodplains.
- ✚ **Height:** Up to 40 feet tall.
- ✚ **Bark:** Thin, grayish to light-brown, with furrowed narrow ridges similar to Norway maple.
- ✚ **Twigs:** Stout, green to purplish-green, brightly colored, often red. Covered with whitish bloom the first year, which readily rubs off.
- ✚ **Buds:** Short-stalked, reddish, usually wooly or downy, whitish, densely hairy.
- ✚ **Leaves:** Opposite, compound palm-like leaves with 3-5 veiny leaflets up to 5 inches long, on short stalks. Very variable in shape, sharp margins with coarse teeth. Light green above, pale green and hairy along veins beneath. Stalk swollen at base.
- ✚ **Flower:** Small, yellowish to greenish. Male and female flowers occur in drooping clusters on separate trees, appearing slightly before leaf-out.
- ✚ **Flowering Period:** April through May; at or before leaf-out.
- ✚ **Fruit:** A typical flattened, v-shaped, winged samara.



EASTERN COTTONWOOD

Populus deltoides



- **Status:** Native
- **Habitat:** Floodplains, streambanks, valleys.
- **Height:** Up to 100 feet tall.
- **Bark:** Greenish-yellow on young tree; gray, furrowed on older trees.
- **Twigs:** Smooth, yellow-brown, moderately stout.
- **Buds:** Brown, shiny, approximately 1/2 to 1 inch long, 6-7 scales, heavy, sticky with glue, fragrant, yellow resin inside.
- **Leaves:** Alternate, simple, large, triangular, with flattened stalks and coarse rounded teeth, up to 6 inches long and often nearly as wide. Dark green and shiny above, lighter beneath with veins prominent on both surfaces. Stem flattened at base of leaf. Leaves from sprouts very large, smooth lustrous green. Yellow in autumn.
- **Flower:** Drooping, loosely grouped catkins. Male and female occur in drooping spikes on separate trees. Before the leaves unfold, the male crowded into rather thick, reddish spikes, the female crowded into narrower, greenish yellow spikes.
- **Flowering Period:** April through May.
- **Fruit:** Short-stalked, ovoid capsule with 4 partitions, approximately 1/4 inch long.

EASTERN HEMLOCK

Tsuga canadensis

- **Status:** Native
- **Habitat:** Rich woods, ravines, forested wetlands.
- **Height:** Up to 100 feet tall.
- **Bark:** Cinnamon-red to gray, tinged with purple, narrow ridges.
- **Twigs:** Alternate, yellow, grayish brown, very hairy, flattened.
- **Buds:** Approximately 1/2 to 3/4 inch wide, oval chestnut brown, hairy scales.
- **Leaves:** Needles flat, narrow, approximately 1/2 inch long. Short, shiny dark-green above, tapering, whitish-green with 2 white lines beneath, appearing as a broad stripe. Stalked at base, persistent comb-like arrangement on twig.
- **Fruit:** Immature: Oval cones, 1/2 to 3/4 inch long. Small on slender stalks. Cone scales as wide as long. Male cones are small structures in clusters in leaf axils and do not persist. Female cones have brown scales, are at twig ends, and persist.





EASTERN WHITE PINE

Pinus strobus

- 🌲 **Status:** Native
- 🌲 **Habitat:** Forested wetlands, bogs, ravines, cool shady north slopes.
- 🌲 **Height:** Up to 120 feet tall.
- 🌲 **Bark:** Smooth, thin, greenish when young, becoming dark brown, deeply-furrowed and blocky when older.
- 🌲 **Twigs:** Smooth, slender, green or light yellowish-green, resinous.
- 🌲 **Buds:** Sharp-pointed, yellowish-brown.
- 🌲 **Leaves:** In clusters of 5 (the only five-needled pine in the east), soft, slender, often bluish green. Retained to end of the second growing season. 3 year needles yellow in October. 2-5 inches long.
- 🌲 **Fruit:** Large, tapering, cylindrical cones, falling when ripe (August-September). Require two seasons to mature, at the end of the first season about $\frac{3}{4}$ inches long, upright. They become pendant at the beginning of the second season and grow to a mature length of 4 to 8 inches.

GREEN ASH

Fraxinus pennsylvanica

- 🌲 **Status:** Native
- 🌲 **Habitat:** Forested wetlands, floodplains, streambanks.
- 🌲 **Height:** Up to 80 feet tall.
- 🌲 **Bark:** Young twigs are gray, thin, hairless. Older stems gray with shallow grooves, ridges, and furrows.
- 🌲 **Twigs:** Stout, gray, terminal bud present, conical; the first pair of lateral buds placed some distance below the terminal;
- 🌲 **Leaves:** Opposite, pinnately-compound with 5-9 (usually 7) leaflets. Shiny green on top, occasionally hairy on bottom with saw-toothed margins. Bright yellow in autumn.
- 🌲 **Flower:** Inconspicuous, small cluster of greenish, petal-free, stalked flowers with male and female occurring on separate trees.
- 🌲 **Flowering Period:** April to June; as leaves emerge.
- 🌲 **Fruit:** Samara with a broad wing and indistinct seed portion.



RED MAPLE

Acer rubrum



- ✚ **Status:** Native
- ✚ **Habitat:** Forested wetlands, rich woods, edges of lakes, ponds, streams, and rivers.
- ✚ **Height:** Up to 75 feet tall.
- ✚ **Bark:** Smooth, gray, often satiny on young trees. Scaly, darker in older trees becoming soft, rough, separating and forming long scales, often up-curling.
- ✚ **Twigs:** Current years growth red. Older twigs light gray, smooth.
- ✚ **Buds:** Sharp, dark red, with prominent overlapping scales.
- ✚ **Leaves:** Opposite, simple, usually 3-lobed (sometimes 5) with sharp angles between lobes, and with sharp irregular teeth. Dark green above, gray-green beneath, approximately 3-4 inches long. Yellow or scarlet in autumn.
- ✚ **Flower:** Red or yellow with petals appearing long before the leaves. Male and female occur on separate trees.
- ✚ **Flowering Period:** March through May; before leaf-buds open.
- ✚ **Fruit:** A double-winged, v-shaped red samara, up to 1 inch long. Matures in late spring, falls and germinates at once.

RED OAK

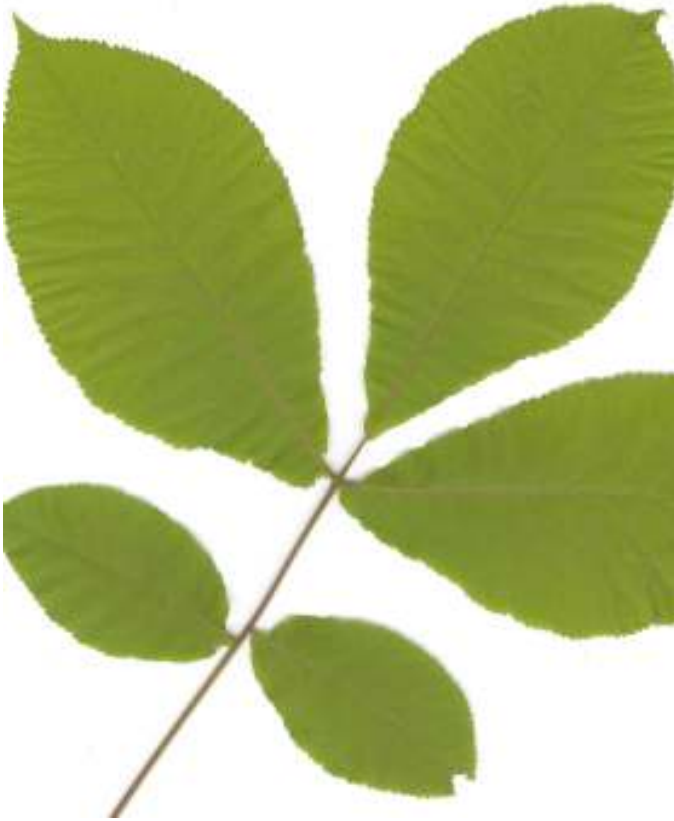
Quercus rubra

- ✚ **Status:** Native
- ✚ **Habitat:** Bottomlands, moist slopes.
- ✚ **Height:** Up to 90 feet tall.
- ✚ **Bark:** Smooth, greenish brown on young stems, becoming broken into ridges, reddish-brown, hard with deep furrows when older. Inner bark reddish.
- ✚ **Twigs:** Alternate, strongly ridged or fluted. Reddish brown or black, smooth.
- ✚ **Buds:** Smooth, brown, blunt-pointed, not angled in cross section. Buds in clusters at ends of twigs. Larger than other oaks except black. ¼ inch long, rounded on the sides. Terminal buds have slight rusty hairs at the apex.
- ✚ **Leaves:** Spikes on tips of lobes. Mostly 3 pairs, lateral lobes, V-shaped space between lobes. Lobes 7-11, triangular in outline, smooth on both sides.
- ✚ **Flower:** Long spreading strings.
- ✚ **Fruit:** Acorn maturing in second year. Cup embracing 1/3 to 1/2 the acorn. Ovate to cylindrical, short, shallow. Large acorns, bitter, inedible, meat pale yellow.



SHAGBARK HICKORY

Carya ovata



- ✚ **Status:** Native
- ✚ **Habitat:** Rich woods, valleys, upland slopes.
- ✚ **Height:** Up to 100 feet tall.
- ✚ **Bark:** Smooth when young, splitting into long plates that curve outward, free at both ends.
- ✚ **Twigs:** Reddish brown, very stout, tough and hard to break. Solid pith.
- ✚ **Buds:** Dark brown, long-pointed approximately ½ inch or more wide. Scales remaining over winter.
- ✚ **Leaves:** Alternate, compound, 4-6 inches long, 5 (rarely 7) leaflets, with the 3 upper leaflets much larger and longer than the lower terminal leaflet. Slightly toothed, with a tuft of hair on each tooth.
- ✚ **Flower:** Male and female occur on same tree. Male flowers 3-branched catkins; female in short spikes.
- ✚ **Flowering Period:** Early spring; before leaf-out.
- ✚ **Fruit:** Thick globe-like husks split away when ripe. Nut with 4 angles, whitish brown shell, thick, kernel sweet.

SILVER MAPLE

Acer saccharinum

- ✚ **Status:** Native
- ✚ **Habitat:** Forested wetlands, floodplains, edges of streams and rivers.
- ✚ **Height:** Up to 80 feet tall.
- ✚ **Bark:** Smooth, scaly/flakey, gray (like that of beech) in young trees breaking into long thin scaly plates, curving away at ends. Darker when older.
- ✚ **Twigs:** V-shaped, point upward at tip, drooping. Orange-brown to red. Bad odor when bruised.
- ✚ **Buds:** Terminal bud small, blunt, red.
- ✚ **Leaves:** Opposite, simple, approximately 5 inches wide. Deeply cleft, 5-lobed, serrate margin sharply toothed. Green above, silver-white beneath. Very silvery under water. Downy beneath when young. Pale yellow in autumn.
- ✚ **Flower:** Small, red or greenish yellow. No petals, occurring long before the leaves. Some trees have only male flowers.
- ✚ **Flowering Period:** February through May; before leaf-out.
- ✚ **Fruit:** Occurring in late spring. The seed germinates at once; flattened, winged fruit, the largest of the native maples, up to 2 inches long.



SWAMP WHITE OAK

Quercus bicolor



- ❧ **Status:** Native
- ❧ **Habitat:** Forested wetlands, floodplains, edges of streams and rivers.
- ❧ **Height:** Up to 70 feet tall.
- ❧ **Bark:** Flaky, light grayish-brown peeling in ragged papery scales. Resembles the manner in which sycamore bark peels. Furrowed at base of tree in long, flat, scaly ridges.
- ❧ **Twigs:** Slender to stout, straw-brown to yellow-green. Bark peels and scales from twig (only oak where this occurs).
- ❧ **Buds:** Small, spherical, terminal buds orange-brown, blunt-pointed, smooth, lateral buds crowded, small.
- ❧ **Leaves:** Alternate, simple, oval, light-green above with hairs beneath oval, 5-6 inches long and 2-4 inches wide, widest above the middle, strongly tapered toward the wedge-shaped base. Margin shallowly lobed. Yellow or brown in autumn.
- ❧ **Flower:** Male and female occur separately on the same tree, the male in catkins; female in short spikes.
- ❧ **Fruit:** Ovoid, light-brown nut approximately 1 inch long, enclosed for about ½ its length by a cap. Occurring singly or often in pairs at the end of a short stalk. Some of the cups usually persist in winter.

SYCAMORE/PLANETREE/BUTTONBALL

Platanus occidentalis

- ❧ **Status:** Native
- ❧ **Habitat:** Floodplains, edges of streams and rivers.
- ❧ **Height:** Up to 100 feet tall.
- ❧ **Bark:** Creamy white on young branches, turning red-brown-gray, then breaking in large thin plates exposing whitish inner bark, giving a white-washed appearance.
- ❧ **Twigs:** Slender, smooth, yellow-brown, slightly zigzag, swollen at joints.
- ❧ **Buds:** Long, conical, resinous, shiny, dark, red-brown, covered by a single cap-like scale. No terminal bud. Pointing outward, enclosed by bases of leaf stalks until the leaves fall.
- ❧ **Leaves:** Alternate, simple, large, broadly ovate with 3-5 pointed lobes, maple-like, pubescent beneath when young, with long pointed teeth.
- ❧ **Flower:** Small, inconspicuous. Male and female occur separately in globose heads on the same tree.
- ❧ **Flowering Period:** April through June.
- ❧ **Fruit:** Large round balls approximately ¼ inch long and 1 inch wide, with bristly hairs at base, containing many seeds. Occurring singly on long stalks. Remains on tree until spring.



TAMARACH/LARCH

Larix laricina



- ✚ **Status:** Native
- ✚ **Habitat:** Bogs, swamps, wet peaty soils.
- ✚ **Height:** Up to 80 feet tall.
- ✚ **Bark:** Thin, reddish brown, scaly. Young branches grayish or pale orange-brown.
- ✚ **Twigs:** Smooth, brownish, many leaf scars.
- ✚ **Buds:** Dark, reddish-brown, globe-like, resinous
- ✚ **Leaves:** Deciduous needles, pale blueish-green, approximately 1 inch long, flexible, triangular, rounded above, keeled beneath. Yellow in autumn (September-November) and dropping off.
- ✚ **Flower:** Occur separately as small cones on the same tree. Male: yellow. Female: rose red; both appearing in March through April.
- ✚ **Fruit:** Small ovoid cones $\frac{1}{2}$ to $\frac{3}{4}$ inch wide with 20 scales. Cone scales concave, smooth, often shining, longer than broad, chestnut brown, smooth on the outside.

WHITE ASH

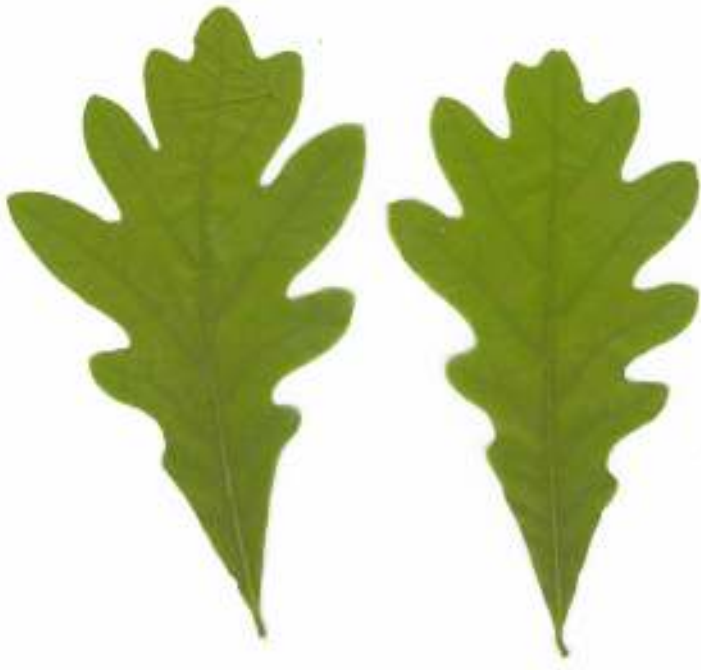
Fraxinus americana

- ✚ **Status:** Native
- ✚ **Habitat:** Rich woods, valleys, slopes, forested wetlands, floodplains, edges of streams and rivers.
- ✚ **Height:** Up to 100 feet tall.
- ✚ **Bark:** Light or dark gray. Smooth when young, grooved in older trees. Longitudinal ridges forming diamond-shaped patterns, separated by narrow interlacing ridges.
- ✚ **Twigs:** Opposite, light greenish-brown with small white lenticles and a slight bloom. Solid pith.
- ✚ **Buds:** Rounded, rusty to dark-brown, rough, hairy. First pair of lateral buds at the same level, directly below the terminal.
- ✚ **Leaves:** Opposite, pinnately compound, oval to lanceolate, 8 to 12 inches long with 5 to 9 leaflets (mostly 7). Five inches long, stalked, smooth or slightly wavy-toothed margins. Yellowish to maroon in the autumn.
- ✚ **Flowers:** Inconspicuous, male and female flowers occur on separate trees, small and inconspicuous, appearing with the leaves. Purplish, in crowded clusters.
- ✚ **Flowering Period:** April through May; before leaf-out.
- ✚ **Fruit:** Cylindrical, light-brown, enclosing a seed and a flattened, elongated wing, 2-3 times long as the body. 1-2 inches wide, in drooping clusters.



WHITE OAK

Quercus alba



- ✚ **Status:** Native
- ✚ **Habitat:** Rich woods, adjacent slopes, edges of streams and rivers.
- ✚ **Height:** Up to 90 feet tall.
- ✚ **Bark:** Gray, thin on young trees. Flaky, irregularly-plated or grooved.
- ✚ **Twigs:** Purplish-gray to greenish-red, moderately stout, smooth.
- ✚ **Buds:** Blunt, smooth, brownish at tips of twigs in clusters.
- ✚ **Leaves:** Alternate, simple, tips of lobes smooth, rounded, no spines. Prominent lobes 4-10, rounded, smooth underneath, green lobes variable in depth. Not broader above the middle. Reddish to violet in autumn. Brown dead leaves remain on tree in winter.
- ✚ **Flowers:** Both sexes occur on the same tree. Male flowers: clusters of hanging beads. Female flowers: few, in angles of new leaves. Greenish, yellowish, or reddish.
- ✚ **Fruit:** Maturing in one season. Acorn cup with wart-like scales. Cup shorter than nut. Sweet and edible.

WHITE SPRUCE

Picea glauca

- ✚ **Status:** Native
- ✚ **Habitat:** Rich woods, adjacent slopes, edges of streams and rivers.
- ✚ **Height:** Up to 70 feet tall.
- ✚ **Bark:** Thin, scaly, grayish-brown, silvery on freshly exposed areas.
- ✚ **Twigs:** Pale gray to yellow brown, no hairs or fuzz.
- ✚ **Buds:** Oval, ragged, brown, smooth.
- ✚ **Leaves:** ½ to 1 inch, blueish-green, slight-bloom, pungent odor when crushed, sharp line of white dots in each groove. Tendency to mass toward the upper side of the twig.
- ✚ **Flowers:** Occur separately as small cones on the same tree. Male: yellowish red. Female: greenish red/purplish.
- ✚ **Cone:** Cylindrical, 2 inches long. Immature: thin scales, soft and flexible. Ripe: light chestnut brown.




YELLOW BIRCH

Betula lenta



- ✚ **Status:** Native
- ✚ **Habitat:** Forested wetlands, floodplains, ravines, cool, rich woods of higher elevations.
- ✚ **Height:** Up to 100 feet tall.
- ✚ **Bark:** Peeling in thin ribbon-like strips when young that roll back in curls. Mature bark shiny yellow or silvery gray, rough and platy.
- ✚ **Twigs:** Stout, bronze or bright-brown, shiny. Smooth or sparsely hairy. Wintergreen odor and taste.
- ✚ **Buds:** Sharp, reddish-brown, oppressed, terminal bud absent, ovate, with chestnut-brown scales.
- ✚ **Leaves:** Alternate, simple, long, oval, sharply double-toothed. Dull, dark-green above, lighter beneath with slight hairs in veins, base rounded to near heart-shaped. Up to 5 inches long.
- ✚ **Flower:** Male and female in separate catkins on the same tree. Male catkins present in winter. Male is yellow, small, narrow in a drooping catkin at branch tips. Female is green and in broader upright catkins placed back from the tip that matures into a brown cone.
- ✚ **Flowering Period:** April through May.
- ✚ **Fruit:** Catkins rounded, globe-like, scales somewhat hairy, erect on twig, $\frac{3}{4}$ inch long, persist into winter.

Appendix A: Other Helpful Field Guides

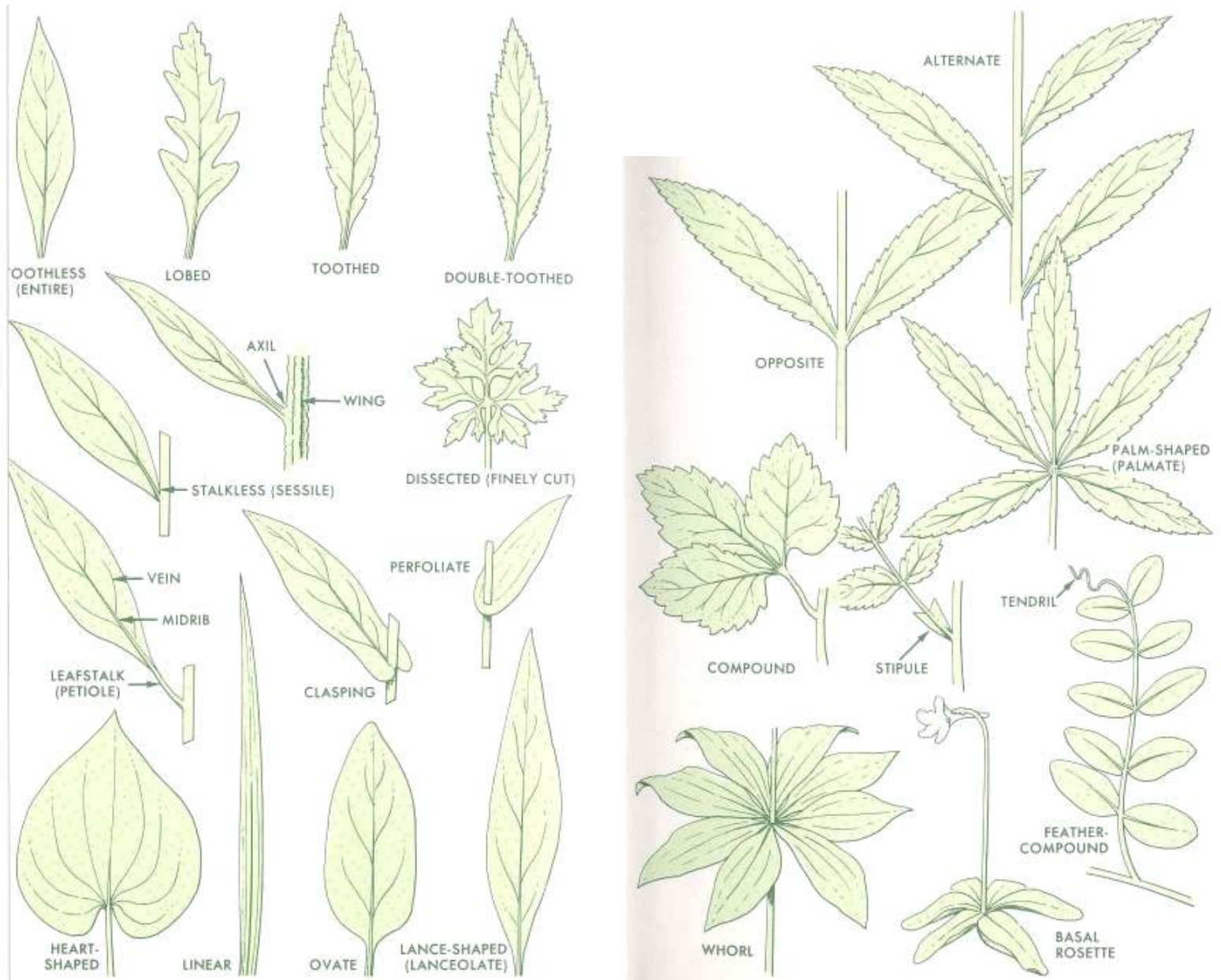
-  **The Book of Swamp and Bog: Trees, Shrubs, and Wildflowers of Eastern Freshwater Wetlands**
by John Eastman
1995 Stackpole Books
ISBN 0-8117-2518-9
-  **A Field Guide to Coastal Wetland Plants of the Northeastern United States**
by Ralph W. Tiner, Jr.
1987 University of Massachusetts Press
ISBN 0-870-23538-9
-  **Freshwater Wetlands - A Guide to Common Indicator Plants of the Northeast**
by Dennis W. Magee
1981 University of Massachusetts Press
ISBN 0-87023-317-3
-  **Northeastern Wetland Flora: Field Office Guide to Plant Species**
by USDA – NRCS/Northeastern National Technical Center, Chester Pennsylvania
-  **Plants in Wetlands: A Redington Field Guide to Biological Interactions**
by Charles B. Redington
1994 Kendall/Hunt Publishing Company
ISBN 0-84038-983-3
-  **Pond and Brook**
by Michael J. Caduto
1990
ISBN 0-87451-509-1
-  **Pond Life: A Golden Guide**
by George K. Reid
1987 Golden Books
ISBN 0-30724-017-7
-  **Through The Looking Glass**
by Susan Borman, Robert Korth, Jo Temte
1997/1999 Wisconsin Lakes Partnership
ISBN 0-93231-032-X
-  **Wetland Planting Guide for Northeast United States**
by Gwendolyn A. Thunhorst
1993 Environmental Concern, Inc.
ISBN 1-88322-602-3
-  **Wetlands - National Audubon Society Nature Guides**
by William A. Niering
1985 Alfred A. Knopf, New York

Appendix B: Glossary of Terms

- ✿ **Alternate:** Leaves arising singly along the stem, not in pairs or whorls.
- ✿ **Annual:** Living or growing for only one year or season.
- ✿ **Axil:** The angle where two structures join; for example, where a leaf joins the stem.
- ✿ **Axillary:** Occurring in or growing from an axil.
- ✿ **Basal:** Located at or arising from the base of a plant or a plant part.
- ✿ **Berry:** A small, juicy, fleshy fruit containing one to many seeds.
- ✿ **Capsule:** A dry fruit containing two to many seeds and opening by valves, slits, or pores.
- ✿ **Catkin:** Scaly spike of inconspicuous flowers lacking petals.
- ✿ **Ciliate:** Bearing margined hairs.
- ✿ **Clasping:** Leaves that partially encircle the stem at the base.
- ✿ **Compound (Leaf):** Divided into two or more distinct, separate parts (leaflets).
- ✿ **Cone:** A hard, woody, globose to cylindric arrangement of bracts or scales in the axils of which the reproductive structures are found.
- ✿ **Deciduous:** Falling from the plant after maturity each year.
- ✿ **Elliptic:** Broadest at the middle, gradually tapering to both ends.
- ✿ **Emergent:** Rooted in shallow water with most of the plant growing above the surface.
- ✿ **Emersed:** Raised out of the water, as in the flowers or fruits of some floating plants.
- ✿ **Entire (Leaf):** Having a continuous/smooth margin, unbroken by toothing or divisions.
- ✿ **Evergreen:** Remaining green throughout the winter.
- ✿ **Fibrous:** Referring to a cluster of slender roots, all with the same diameter.
- ✿ **Frond:** The leaf of a fern.
- ✿ **Furrowed:** Grooved
- ✿ **Glabrous:** Without hairs or scales.
- ✿ **Globose:** Shaped like a globe; round.
- ✿ **Head:** A group of flowers tightly crowned together in a more or less rounded structure.
- ✿ **Herbaceous:** A plant that dies back to the ground at the end of the growing season, or a plant part that is leaf-like in color and texture.
- ✿ **Inflorescence:** The entire flower cluster.
- ✿ **Lanceolate:** Lance-shaped; broadest near the base, gradually tapering to the narrower apex.
- ✿ **Leaflet:** One of the segments of a compound leaf.
- ✿ **Lenticels:** The small, corky pores or narrow lines on the surface of stems of woody plants that allow the interchange of gases between the interior tissue and surrounding air. A small opening in a stem.
- ✿ **Lip:** The upper and lower parts of certain tubular flowers.
- ✿ **Lobe:** The indented part of a leaf or flower, not divided into distinct and separate parts but still interconnected to similar parts of the leaf or flower.
- ✿ **Midrib/Midvein:** The central or main vein of a leaf.
- ✿ **Native:** A species that originated in a certain place or region; indigenous.

- 🌿 **Node:** The place on the stem where leaves or branches are attached.
- 🌿 **Non-Native:** Not originating in a certain geographic location than where they are found.
- 🌿 **Nut:** A hard, dry, one-seeded fruit not opening at maturity.
- 🌿 **Nutlet:** A small nut.
- 🌿 **Oblong:** Broadest at the middle, and tapering to both ends, but broader than elliptic.
- 🌿 **Opposite:** Leaves arising in pairs on either side of a stem.
- 🌿 **Oval:** Broadly elliptic.
- 🌿 **Ovate:** Broadly rounded at the base, becoming narrowed above.
- 🌿 **Palmate:** Having three or more veins, lobes, or leaflets arising from one point.
- 🌿 **Panicle:** A compound, loosely branched flower cluster.
- 🌿 **Parallel Veined:** Having veins all parallel as opposed to in a network.
- 🌿 **Perennial:** Living for two or more years.
- 🌿 **Petal:** One segment of the series of floral leaves lying just inside the sepals, often the most conspicuous.
- 🌿 **Petiole:** The stalk-like part of the leaf, attaching it to the stem.
- 🌿 **Pinnate:** Divided once along an elongated axis into distinct segments.
- 🌿 **Pith:** The soft tissue at the center of a plant's stem; it may be solid or hollow at maturity.
- 🌿 **Pod:** A fruiting structure containing the mature seeds.
- 🌿 **Pubescent:** Covered in fine, short hairs.
- 🌿 **Recurved:** Curving downward.
- 🌿 **Rhizome:** A horizontal, usually underground stem that often sends out roots and shoots from its nodes.
- 🌿 **Ribbed:** Bearing ridges.
- 🌿 **Root:** The descending axis of the plant, usually growing in an opposite direction from the stem.
- 🌿 **Samara:** A winged fruit.
- 🌿 **Scale:** A modified leaf or thin, flattened structure.
- 🌿 **Sepal:** One segment of the outer series of floral leaves, often green in color, but occasionally of a different color and petal-like.
- 🌿 **Serrate:** With sharp, forward-pointing teeth on the margin.
- 🌿 **Sessile:** Without a stalk.
- 🌿 **Sheath:** The base of a leaf that encircles the stem.
- 🌿 **Simple (Leaf):** A leaf composed of a single blade.
- 🌿 **Smooth:** Not rough to the touch.
- 🌿 **Spike:** An elongated cluster of sessile flowers.
- 🌿 **Shrub:** A woody plant, smaller than a tree, with several stems or trunks arising from a single base; a bush.
- 🌿 **Simple Leaf:** A leaf with a single blade.
- 🌿 **Succulent:** Juicy and fleshy.
- 🌿 **Tendrils:** A device, usually coiled, that enables some vines to climb.
- 🌿 **Toothed:** With teeth along the margin.
- 🌿 **Tuber:** A thickened part of an underground root or rhizome, serving for food storage and often for propagation.
- 🌿 **Whorled (Leaf):** Arranged in a group of three or more leaves, branches, or pedicles at the node on the stem.

Appendix C: Leaf Shapes & Arrangements*



* Peterson, Lee Allen. *"A Field Guide to Edible Wild Plants of Eastern and Central North America"*, Houghton Mifflin Company, 1977.

Appendix D: Native Shoreland/Riparian Buffer Plantings for New Hampshire



Native Shoreland*/Riparian Buffer Plantings for New Hampshire

* The protected shoreland is the area of land that exists between the reference line of a waterbody and 250 feet from the reference line.

Common Name(s)	Latin Name	Height	Growth Rate	Rooting	Light Preference	Soil Preference	Habitat	Associated Birds & Mammals (Cover, Nesting or Food) & Food Value
Trees								
American Basswood (American Linden)	<i>Tilia americana</i>	Medium-Large 60-100'	Moderate	Deep	Full/Part Shade or Full Sun	Moist	Rich woods, valleys, gentle slopes	Wildlife: Pileated woodpecker, wood duck, other birds; deer, rabbit, squirrel Food: Seeds, twigs
American Beech	<i>Fagus grandifolia</i>	Medium-Large 60-90'	Slow	Shallow	Full/Part Shade or Full Sun	Dry or Moist	Rich woods, well-drained lowlands	Wildlife: Blue jay, chickadees, nuthatches, quail, ruffed grouse, tufted titmouse, wild turkey, wood duck, woodpeckers; bear, chipmunk, deer, fox, porcupine, snowshoe hare, squirrel Food: Nuts, buds, sap
American Hophornbeam (Ironwood)	<i>Ostrya virginiana</i>	Small 20-40'	Slow	Shallow	Full/Part Shade or Full Sun	Dry or Moist	Rich woods	Wildlife: Downy woodpecker, mockingbird, purple finch, ring-necked pheasant, rose-breasted grosbeak, ruffed grouse, wild turkey, wood quail; deer, rabbit, squirrel Food: Nuts, buds, seeds
American Hornbeam (Blue Beech/Musclewood)	<i>Carpinus caroliniana</i>	Small/Shrubby 20-40'	Slow	Moderate	Full/Part Shade or Full Sun	Dry, Moist, Flood Tolerant	Rich woods, forested wetlands, ravines, streambanks	Wildlife: Quail, ruffed grouse, wood duck; beaver, deer, squirrel Food: Seeds, buds
American Mountain Ash	<i>Sorbus americana</i>	Small Up to 25'	Fast	Shallow	Full/Part Shade or Full-Sun	Dry, Moist	Forested wetlands, rich woods	Wildlife: Bluebird, brown thrasher, catbird, cedar waxwing, grosbeak, mockingbird, robin, thrushes, wild turkey; bear Food: Fruit, twigs
Balsam Fir	<i>Abies balsamea</i>	Small-Medium 40-60'	Fast	Shallow	Full Sun	Moist, Flood Tolerant	Forested wetlands, streambanks, rich woods	Wildlife: Ruffed grouse, songbirds; small mammals, moose Food: Seeds
Balsam Poplar	<i>Populus balsamea</i>	Medium 60-80'	Fast	Shallow	Full Sun	Moist	Floodplains, riverbanks, streambanks, valleys	Wildlife: Beaver, deer, mouse, snowshoe hare Food: Buds, catkins, twigs, foliage
Big-Toothed Aspen	<i>Populus grandidentata</i>	Small-Medium 30-60'	Fast	Shallow	Full Sun	Dry or Moist	Sandy upland soils, floodplain streams; with quaking aspen	Wildlife: Black-capped chickadee, evening grosbeak, purple finch, ruffed grouse, yellow-bellied sapsucker; deer Food: Buds, catkins, bark, twigs, and foliage
Black Ash	<i>Fraxinus nigra</i>	Medium 60-80'	Moderate	Shallow	Full/Part Shade	Moist, Flood Tolerant	Forested wetlands, streambanks	Wildlife: Songbirds, wood duck; deer, moose, small mammals Food: Fruit, twigs, young leaves
Black Birch (Sweet Birch)	<i>Betula lenta</i>	Medium 40-60'	Moderate	Shallow	Full/Part Shade	Moist	Cool, moist uplands, rich woods	Wildlife: Grouse; deer, rabbit Food: Buds, catkins, seeds

Common Name(s)	Latin Name	Height	Growth Rate	Rooting	Light Preference	Soil Preference	Habitat	Associated Birds & Mammals (Cover, Nesting or Food) & Food Value
Trees (Continued)								
Black Cherry	<i>Prunus serotina</i>	Medium 40-60'	Moderate	Deep Taproot	Full/Part Shade	Dry or Moist	Rich woods, on many sites except very dry soils	Wildlife: Bluebird, blue jay, brown thrasher, cardinal, catbird, cedar waxwing, common crow, eastern kingbird, evening grosbeak, mockingbird, northern flicker, northern oriole, robin, ruffed grouse, sparrows, thrushes, veery, vireo, yellow-bellied sapsucker; bear, chipmunk, deer, fox, raccoon, squirrel Food: Berries, buds, sap
Black Gum (Tupelo)	<i>Nyssa sylvatica</i>	Medium 50-60	Slow	No Information Available	Full/Part Shade	Dry or Moist	Forested wetlands, floodplains	Wildlife: Bluebird, cardinal, catbird, chickadee, crow, finches, mallards, robin, ruby-throated hummingbird, ruffed grouse, vireo, wild turkey, woodpeckers, wood duck; honeybees, bear, chipmunk, deer, opossum, squirrel Food: Seeds, sap, nectar.
Black Spruce	<i>Picea mariana</i>	Small Up to 25'	Slow	Shallow	Full/Part Shade	Moist, Flood Tolerant	Bogs, forested wetlands, lake and pond shores	Wildlife: Songbirds, ruffed grouse, spruce grouse; chipmunk, cottontail, deer, porcupine, squirrel Food: Seeds, twigs, nectar, bark
Black Willow	<i>Salix nigra</i>	Small-Medium Up to 50'	Very Fast	Very Shallow	Full Sun	Moist, Flood Tolerant	Forested wetlands, lowlands, floodplains	Wildlife: Songbirds and mammals Food: Buds, catkins
Box Elder	<i>Acer negundo</i>	Medium 40-70'	Very Fast	Deep, Lateral	Full Sun	Dry, Moist, Flood Tolerant	Forested wetlands, lowlands, floodplains	Wildlife: Songbirds and mammals Food: Seeds
Eastern Cottonwood	<i>Populus deltoides</i>	Medium-Large 80-100'	Fast	Shallow	Full Sun	Dry or Moist	Floodplains, streambanks, valleys	Wildlife: Ruffed grouse Food: Catkins
Eastern Hemlock	<i>Tsuga canadensis</i>	Medium-Large 80-100'	Moderate	Shallow Lateral	Full/Part Shade	Dry or Moist, Acidic	Cool, moist uplands, ravines, rock outcrops, streambanks	Wildlife: Black-capped chickadee, blue and green warblers, crossbill, hawks, juncos, pine siskin, ruffed grouse, veery, wild turkey; deer, chipmunk, cottontail, porcupine, squirrel, white-footed mouse Food: Twigs, foliage, seeds
Eastern White Pine	<i>Pinus strobus</i>	Large 70-120'	Moderate	Shallow	Full Sun	Dry or Moist, Well-Drained	Forested wetlands, bogs, ravines, cool shady north slopes	Wildlife: Brown creeper, chickadee, crossbill, grosbeak, junco, nuthatch, pine warbler, sparrows, spruce grouse, wild turkey, woodpeckers; beaver, chipmunk, deer, snowshoe hare, squirrel Food: Seeds, foliage, twigs; excellent winter food
Gray Birch (Wire Birch)	<i>Betula populifolia</i>	Small 20-35'	Fast	Shallow	Full/Part Shade or Full Sun	Dry or Moist	Pioneer Species; poorest of sterile soils, sandy or gravelly slopes	Wildlife: American goldfinch, blue jay, chickadee, northern junco, pine siskin, red-tailed hawk, ruffed grouse, sparrows, vireo, yellow-bellied sapsucker, woodpeckers; snowshoe hare Food: Seeds, buds

Common Name(s)	Latin Name	Height	Growth Rate	Rooting	Light Preference	Soil Preference	Habitat	Associated Birds & Mammals (Cover, Nesting or Food) & Food Value
Trees (Continued)								
Green Ash	<i>Fraxinus pennsylvanica</i>	Medium-Large 60-80'	Fast	Shallow	Full/Part Shade or Full Sun	Moist, Flood Tolerant	Forested wetlands, floodplains, streambanks; never on dry soils	Wildlife: Cardinal, finches, evening grosbeak, mourning dove, red-winged blackbird, wood duck; beaver, chipmunk, deer, porcupine, squirrel Food: Seeds, foliage
Northern White Cedar (Arborvitae)	<i>Thuja occidentalis</i>	Medium 30-60'	Slow to Moderate	Shallow	Full Sun	Moist, Flood Tolerant	Bogs, wetlands, rich woods	Wildlife: Songbirds; small mammals, deer Food: Seeds, needles
Quaking/Trembling Aspen (Poplar)	<i>Populus tremuloides</i>	Small-Medium 30-60'	Fast	Shallow	Full Sun	Dry or Moist	Pioneer Species; dry open woods, sandy or gravelly slopes	Wildlife: Ruffed grouse; beaver, deer, porcupine, snowshoe hare Food: Buds, catkins, bark, twigs, and foliage
Red Maple	<i>Acer rubrum</i>	Medium 40-75'	Moderate to Fast	Very Shallow	Full Sun	Dry, Moist, Flood Tolerant	Forested wetlands, streambanks, lakeshores, rich woods,	Wildlife: Cardinal, chickadee, evening and pine grosbeaks, finches, robin, yellow-bellied sapsucker; beaver, chipmunk, deer; opossum, squirrel, snowshoe hare Food: Seeds, buds, bark, twigs, sap
Red Oak	<i>Quercus rubra</i>	Medium 60-90'	Moderate	Deep Lateral	Full/Part Shade or Full Sun	Dry or Moist	Bottomlands, moist slopes,	Wildlife: Blue jay, brown thrasher, ducks, hawks, quail, nuthatch, ruffed grouse, towhee, wild turkey, woodpecker; bear, chipmunk, deer, gopher, opossum, raccoon, squirrel Food: Acorns
Shagbark Hickory	<i>Carya ovata</i>	Large 70-100'	Fast	Deep Taproot	Full/Part Shade	Dry or Moist	Rich woods, valleys, upland slopes	Wildlife: Cardinal, field sparrows, pine warbler, rose-breasted grosbeak, rufous-sided towhee, white-breasted nuthatch, wild turkey, wood duck, yellow-rumped warbler; chipmunks, squirrels Food: Nuts
Silver Maple	<i>Acer saccharinum</i>	Medium 60-80'	Moderate	Shallow	Full/Part Shade or Full Sun	Moist, Flood Tolerant	Forested wetlands, riverbanks, floodplains, streambanks	Wildlife: Cardinal, goldfinch, evening and pine grosbeaks, northern oriole Food: Seeds, buds
Striped Maple (Moosewood/ Moose Maple)	<i>Acer pennsylvanicum</i>	Small/Shrubby 20-30'	Moderate	Shallow	Full/Part-Shade	Moist	Rich woods, cool moist sites	Wildlife: Ruffed grouse; beaver, deer, moose, porcupine, rabbit Food: Buds, bark, samaras
Sugar Maple	<i>Acer saccharum</i>	Medium-Large 60-100'	Slow	Shallow	Full/Part Shade or Full Sun	Moist	Valleys and uplands; tolerates almost all soil types	Wildlife: Cardinal, goldfinch, grosbeak, ring- necked pheasant, robin, ruffed grouse, vireo; beaver, chipmunk, porcupine; Browse for deer, rabbit, snowshoe hare Food: Seeds, twigs, bark

Common Name(s)	Latin Name	Height	Growth Rate	Rooting	Light Preference	Soil Preference	Habitat	Associated Birds & Mammals (Cover, Nesting or Food) & Food Value
Trees (Continued)								
Swamp White Oak	<i>Quercus bicolor</i>	Medium 60-70'	Fast	No Information Available	Full/Part Shade	Moist	Forested wetlands, floodplains, streambanks	Wildlife: Barred owl, blue jay, cardinal, brown thrasher, grouse, mallards, nuthatch, quail, red-bellied woodpecker, red-tailed hawk, ruffed grouse, starling, towhee, wild turkey, yellow-throated wabler, wren; beaver, chipmunk, cottontail, deer, gopher, opossum, raccoon, squirrel, white-footed mouse, wild turkey Food: Acorns
Sweet Gum	<i>Liquidambar styraciflua</i>	Medium-Large 60-100'	Moderate	No Information Available	Full Sun	Moist	Valleys, Lower slopes, mixed woodlands	Wildlife: Mourning dove, finches, junco, wren; beaver, chipmunk, squirrel Food: Seeds
Sycamore (Planetree/Buttonwood)	<i>Platanus occidentalis</i>	Large 80-100'	Slow	No Information Available	Full/Part Shade or Full-Sun	Dry or Moist	Floodplains, lakeshores, streambanks	Wildlife: Finches; chipmunk, squirrel Food: Seeds
Tamarack (American/Eastern Larch)	<i>Larix laricina</i>	Small-Medium 40-80'	Variable	Moderate	Full Sun	Moist, Flood Tolerant	Bogs, swamps, wet peaty soils, drier upland loamy soils	Wildlife: Blue jay, kinglets, pheasant, red crossbill, robin, ruffed grouse, spruce grouse, yellow-bellied sapsucker; chipmunk, deer, porcupine, red squirrel, snowshoe hare Food: Needles, twigs, inner bark, seeds
White Ash	<i>Fraxinus americana</i>	Medium-Large 70-100'	Moderate	Shallow	Full/Part Shade or Full Sun	Moist, Flood Tolerant	Rich woods, valleys, slopes, forested wetlands, floodplains, streambanks	Wildlife: Finches, grosbeaks, red-winged blackbird, wood duck; deer, squirrel Food: Seeds, foliage
White Birch (Paper Birch)	<i>Betula papyrifera</i>	Medium 50-75'	Fast	Shallow	Full Sun	Dry or Moist	Forested wetlands, rich woods	Wildlife: Grouse, siskins Food: Seeds, buds
White Oak	<i>Quercus alba</i>	Medium-Large 50-90'	Moderate	Deep	Full/Part Shade or Full Sun	Deep, rich, well-drained	Streambanks, lakeshores, gentle slopes; adapts to almost any condition	Wildlife: Blue jay, brown thrasher, nuthatch, quail, ruffed grouse, towhee, wild turkey, wood duck, woodpecker; chipmunk, bear, deer, gopher, opossum, raccoon, squirrel Food: Acorns
White Spruce	<i>Picea glauca</i>	Medium 40-70'	Moderate	Shallow	Full/Part Shade or Full Sun	Dry or Moist	Streambanks, lakeshores, rich woods, adjacent slopes	Wildlife: Fishers, martens, snowshoe hare, voles Food: Seeds
Yellow Birch (Sweet Birch)	<i>Betula alleghaniensis</i>	Medium-Large 70-100'	Slow	Shallow/Moderate	Full/Part Shade	Dry or Moist	Forested wetlands, floodplains, ravines, cool, rich woods of high elevations	Wildlife: Black-capped chickadee, common redpoll, goldfinch, pine siskins, red-shouldered hawk, ring-necked pheasant, ruffed grouse, wild turkey, wood duck, yellow-bellied sapsucker; beaver, chipmunk, deer, porcupine, squirrel, snowshow hare Food: Catkins, buds, bark, twigs, foliage, seeds

Common Name(s)	Latin Name	Height	Growth Rate	Light Preference	Soil Preference	Habitat	Associated Birds & Mammals (Cover, Nesting or Food) & Food Value
Shrubs							
American Hazelnut	<i>Corylus americana</i>	Medium 5-10'	Moderate	Full/Part Shade or Full Sun	Moist	Borders of woods, hillsides, thickets	Wildlife: Blue jay, brown thrasher, cedar waxwing, hairy woodpecker, ring-necked pheasant, ruffed grouse; chipmunk, deer, rabbit, squirrel Food: Nuts, berries, foliage
Beaked Hazelnut	<i>Corylus cornuta</i>	Small 6-10'	Moderate	Full/Part Shade or Full Sun	Dry	Dry places	Wildlife: Birds, mammals Food: Beaked nuts
Black Chokeberry	<i>Aronia meloncarpa</i>	Medium Up to 10'	Moderate	Full/Part Shade or Full Sun	Moist, Flood Tolerant	Shrub and forested wetlands	Wildlife: Cedar waxwing, chickadees, ruffed grouse, sharp-tailed grouse; deer, rabbit, squirrel Food: Berries, buds
Buttonbush	<i>Cephalanthus occidentalis</i>	Medium 6-12'	Moderate	Full/Part Shade or Full Sun	Moist, Flood Tolerant	Streambanks, lakeshores, ponds, shrub and forested wetlands	Wildlife: Ducks, rails, ruby-throated hummingbird; beaver, deer, muskrat, butterflies, honeybees and other insects Food: Fruit, twigs, leaves, seeds, nectar
Chokecherry	<i>Prunus virginiana</i>	Small 3-6'	Moderate	Full/Part Shade or Full Sun	Dry or Moist	With Aspen; dry soils	Wildlife: Bluebird, brown thrasher, catbird, crow, eastern kingbird, evening grosbeak, orioles, pileated woodpecker, ring-necked pheasant, robin, rose grosbeak, ruffed grouse, thrushes, yellow-bellied sapsucker; rabbit, squirrel Food: Berries, buds, foliage
Elderberry	<i>Sambucus canadensis</i>	Small-Medium 3-12'	Moderate	Full/Part Shade or Full Sun	Moist, Flood Tolerant	Rich woods, shrub and forested wetlands, marshes	Wildlife: Bluebirds, blue jay, brown thrasher, cardinal, catbird, grosbeak, indigo bunting, pileated woodpecker, ringed-neck pheasant, robin, rose-breasted grosbeak, ruffed grouse, thrushes, wild turkey, woodpecker; chipmunk, deer, rabbit, squirrel Food: Berries, nectar, twigs, bugs
Gray Dogwood (Red-Panicle Dogwood)	<i>Cornus racemosa</i>	Medium 10-15'	Moderate	Full/Part Shade or Full Sun	Dry or Moist	Roadsides, thickets, wetlands	Wildlife: Blue jay, cardinal, catbird, cedar waxwing, eastern kingbird, finch, flycatcher, grosbeak, hairy woodpecker, northern flicker, phoebe, pileated woodpecker, pine grosbeak, pine warbler, red-bellied woodpecker, ring-necked pheasant, robin, ruffed grouse, starling, swamp sparrow, tufted titmouse, veery, vireo, wild turkey, wood duck, wood thrush, woodcock, yellow-bellied sapsucker; chipmunk, deer, red fox, rabbit, squirrel Food: Berries, twigs
Highbush Blueberry	<i>Vaccinium corymbosum</i>	Medium 5-15'	Slow	Full/Part Shade or Full Sun	Dry, Moist, Flood Tolerant	Shrub and forested wetlands, rich woods	Wildlife: Baltimore oriole, bluebird, blue jay, cardinal, chickadee, gray catbird, kingbird, orioles, phoebe, red-bellied woodpecker, ring-necked pheasant, robin, ruffed grouse, rufous-sided towhee, scarlet tanager, tufted titmouse, veery, wild turkey, woodpeckers, wood thrush; black bear, chipmunk, deer, muskrat, rabbit, squirrel, white-footed mouse Food: Berries, foliage, twigs, buds
Hobblebush	<i>Viburnum alnifolium</i>	Medium Up to 10'	Moderate	Full/Part Shade	Moist, Flood Tolerant	Cool, moist ravines, shady lakeshores	Wildlife: Brown thrasher, cardinal, cedar waxwing, evening grosbeak, robin Food: Fruit

Common Name(s)	Latin Name	Height	Growth Rate	Light Preference	Soil Preference	Habitat	Associated Birds & Mammals (Cover, Nesting or Food) & Food Value
Shrubs (Continued)							
Juniper	<i>Juniperus communis</i>	Small 1-4'	Slow	Full Sun	Dry	Dry open land	Wildlife: Cedar waxwing, finches, grosbeaks, grouse, pheasant, robin; deer, rabbit, moose Food: Twigs, foliage, fruit
Lowbush Blueberry	<i>Vaccinium angustifolium</i>	1-2'	Slow	Full/Part Shade or Full Sun	Dry or Moist	Bogs, dry sandy flats, rocky slopes	Wildlife: Blue jay, grouse, kingbird, oriole, robin, tanagers, woodpeckers; squirrel Food: Berries, foliage, twigs
Maleberry	<i>Lyonia ligustris</i>	Up to 10'	Moderate	Full/Part Shade or Full Sun	Moist	Shrub and forested wetlands, rich woods, gentle slopes	Wildlife: Songbirds and mammals Food: Fruit
Mapleleaf Viburnum	<i>Viburnum acerifolium</i>	Small 3-6'	Moderate	Full/Part Shade or Full Sun	Moist	Rich woods	Wildlife: Songbirds and mammals Food: Fruit
Mountain Laurel	<i>Kalmia latifolia</i>	Up to 20'	Moderate	Full/Part Shade or Full Sun	Dry or Moist	Mixed uplands, acid soils	Wildlife: Ruffed grouse; deer Food: Foliage, buds, twigs, nectar
Nannyberry	<i>Viburnum lentago</i>	Medium-Large 10-25'	Moderate	Fall/Part Shade or Full Sun	Dry or Moist	Rich woods	Wildlife: Songbirds, mammals Food: Berries
Northern Arrowwood	<i>Viburnum recognitum</i>	Medium 10-15'	Moderate	Fall/Part Shade or Full Sun	Moist, Flood Tolerant	Shrub and forested wetlands, lakeshores, streambanks	Wildlife: Ruffed grouse, songbirds; bear, chipmunks, raccoon, squirrel, skunk, white-footed mouse Food: Berries
Northern Wild Raisin (Witherod Viburnum)	<i>Viburnum nudum var. cassinoides</i>	Medium 6-10'	Moderate	Full/Part Shade	Moist, Flood Tolerant	Shrub and forested wetlands, valleys, slopes, streambanks	Wildlife: Brown thrasher, cedar waxwing, flycatcher, ruffed grouse, veery, woodcock, yellow-warbler; chipmunk, deer, muskrat, squirrel, snowshoe hare Food: Bark, twigs, buds
Pussy Willow	<i>Salix discolor</i>	Medium-Large Up to 15'	Fast	Full Sun	Moist, Flood Tolerant	Shrub and forested wetlands, streambanks, lakeshores	Wildlife: American goldfinch, ruffed grouse; beaver, hare, rabbits, squirrel Food: Buds, catkins, twigs, bark
Raspberry	<i>Rubus idaeus</i>	Small Up to 6'	Fast	Full/Part Shade or Full Sun	Dry or Moist	Thickets, edges of woods	Wildlife: Songbirds and mammals Food: Fruits
Red Osier Dogwood	<i>Cornus stolonifera</i>	Small-Medium 4-8'	Fast	Full/Part Shade or Full Sun	Moist, Flood Tolerant	Rich woods, streambanks, lakeshores	Wildlife: Bluebird, brown thrasher, cardinal, catbird, cedar waxwing, downy woodpecker, eastern kingbird, finches, northern flicker, pine warbler, purple finch, ringed-neck pheasant, ruffed grouse, vireo, wild turkey, woodpeckers, wood duck; chipmunk, deer, rabbit, squirrel Food: Berries, twigs
Rhodora	<i>Rhododendron canadense</i>	Small 3-4'	Slow	Full Sun	Moist, Flood Tolerant	Bogs, slopes, rocky summits	Wildlife: Songbirds and mammals Food: Leaves

Common Name(s)	Latin Name	Height	Growth Rate	Light Preference	Soil Preference	Habitat	Associated Birds & Mammals (Cover, Nesting or Food) & Food Value
Shrubs (Continued)							
Shadbush (Serviceberry/Juneberry)	<i>Amelanchier spp.</i>	Large 15-25'	Slow	Full/Part Shade or Full Sun	Dry, Moist, Flood Tolerant	Shrub and forested wetlands, floodplains, streambanks, rich woods	Wildlife: Bluebird, brown thrasher, cardinal, catbird, cedar waxwing, gray catbird, junco, orioles, red squirrel, robin, ruffed grouse, scarlet tanager, thrushes, veery, woodpeckers; beaver, deer, red squirrel, skunk Food: Berries, twigs
Silky Dogwood	<i>Cornus amomum</i>	Medium 6-10'	Fast	Full/Part Shade or Full Sun	Dry, Moist, Flood Tolerant	Shrub and forested wetlands, streambanks	Wildlife: Baltimore oriole, black-capped chickadee, blue jay, brown thrasher, cardinal, catbird, cedar waxwing, downy woodpecker, eastern kingbird, flycatcher, mockingbird, northern flicker, pine warbler, purple finch, red-bellied woodpecker, ringed- neck pheasant, robin, rose-breasted grosbeak, ruffed grouse, song sparrow, starlings, tufted-titmouse, wild turkey, wood duck, wood thrush, veery; chipmunk, deer, rabbit, raccoon, skunk, squirrel, white-footed mouse Food: Berries, buds, twigs
Speckled Alder	<i>Alnus rugosa</i>	Large 15-25'	Fast	Full Sun	Moist, Flood Tolerant	Shrub and forested wetlands, streambanks, lakeshores	Wildlife: Alder flycatcher, catbird, goldfinch, mallards, pheasant, pine siskin, red-winged blackbird, ruffed grouse, swamp sparrow, yellow-bellied flycatcher, woodcock; bear, beaver, deer, cottontail, moose, muskrat, snowshoe hare Food: Buds, twigs, bark, leaves
Spicebush	<i>Lindera benzoin</i>	Small-Large 6-17'	Moderate	Full Sun	Moist, Flood Tolerant	Shrub and forested wetlands, rich woods	Wildlife: Catbird, kingbird, pheasant, quail, robin, ruffed grouse, veery, vireo, wood thrush; swallowtail butterflies; deer, muskrat Food: Fruit, buds, twigs, leaves
Swamp Azalea	<i>Rhododendron viscosum</i>	Up to 5'	Moderate	Full/Part Shade or Full Sun	Moist, Flood Tolerant	Shrub and forested wetlands, rich woods	Wildlife: Hummingbird; butterflies and other insects; deer Food: Leaves, nectar
Swamp Blackberry	<i>Rubus hispidus</i>	Small Up to 6'	Slow	Full/Part Shade	Dry or Moist	Shrub and forested wetlands, rich woods	Wildlife: Blue jay, brown thrasher, cardinal, cedar waxwing, grackle, gray catbird, grosbeak, mockingbird, oriole tanager, ring- necked pheasant, robin, ruffed grouse, rufous-sided thrushes, towhee, veery, wild turkey, woodcock, woodpeckers, wood thrush; chipmunk, cottontail, deer, raccoon, skunk, squirrel Food: Fruit, canes
Sweet Gale	<i>Myrica gale</i>	Small 1-4'	Slow	Full Sun	Moist, Flood Tolerant	Shrub and forested wetlands, lakeshores, streambanks	Wildlife: Black-capped chickadee, catbird, common yellowthroat, phoebe, pied-billed grebe, ruffed grouse, tree swallow, tufted titmouse, wild turkey; deer, muskrat Food: Buds, leaves
Sweet Pepperbush	<i>Clethra alnifolia</i>	Medium 3-10'	Moderate	Full/Part Shade or Full Sun	Moist, Flood Tolerant	Shrub and forested wetlands, lakeshores, streambanks	Wildlife: Butterflies and other insects Food: Fruit, seeds, nectar
Winterberry Holly (Black Alder)	<i>Ilex verticillata</i>	Medium 6-10'	Slow	Full/Part Shade or Full Sun	Moist, Flood Tolerant	Shrub and forested wetlands, lakeshores, streambanks	Wildlife: Cardinal, catbird, cedar waxwing, chickadees, finches, flickers, ruffed grouse, thrushes, vireo, woodpeckers; bear, cottontail, deer, moose, skunk, white-footed mouse Food: Berries, twigs, leaves

Common Name(s)	Latin Name	Height	Growth Rate	Light Preference	Soil Preference	Habitat	Associated Birds & Mammals (Cover, Nesting or Food) & Food Value
Shrubs (Continued)							
Witch Hazel	<i>Hammamelis virginiana</i>	Large 20-30'	Slow	Full/Part Shade or Full Sun	Moist	Dry or rich woods	Wildlife: Cardinal, ring-necked pheasant, ruffed grouse, wild turkey; deer, squirrels Food: Seeds, buds, twigs, bark
Common Name(s)	Latin Name	Height		Light Preference	Soil Preference	Habitat	Associated Birds & Mammals (Cover, Nesting or Food) & Food Value
Groundcover/Herbaceous Perennials							
Boneset	<i>Eupatorium perfoliatum</i>	4-6'		Full Sun	Dry or Moist	Wet meadows, marshes, pond edges	Wildlife: Mallards, ruffed grouse, swamp sparrow, wild turkey; butterflies and other insects Food: Nectar
Blue Flag Iris	<i>Iris versicolor</i>	2-3'		Full Sun	Moist, Flood Tolerant	Marshes, lakeshores, streambanks	Wildlife: Blue-winged teal, ruby-throated hummingbird, wood duck; butterflies and other insects; muskrat Food: Nectar, shoots
Bunchberry	<i>Cornus canadensis</i>	3-8"		Full/Part Shade	Moist	Cool, moist woods	Wildlife: Sharp-tailed grouse, spruce-grouse; moose Food: Fruit, buds
Cardinal Flower	<i>Lobelia cardinalis</i>	2-4'		Full Sun	Moist, Flood Tolerant	Damp sites, streambanks	Wildlife: Ruby-throated hummingbirds; butterflies and other insects; bear, deer Food: Nectar
Cattail (Broad-Leaf)	<i>Typha latifolia</i>	Up to 10'		Full Sun	Moist, Flood Tolerant	Marshes, lakeshores, streambanks	Wildlife: Blue-winged teal, black-crowned night heron, red-winged blackbird, king rail, least and American bittern, mallards, marsh wren, swamp sparrow, Virginia rail; chipmunk, deer, muskrat Food: Seed heads
Christmas Fern	<i>Polystichium acrostichoides</i>	Up to 1'		Full/Part Shade	Moist	Rich woods	Wildlife: Ruffed grouse; box turtle, chipmunk, rabbit Food: Fronds, filldheads
Cinnamon Fern	<i>Osmunda cinnamomea</i>	Up to 3'		Full/Part Shade	Moist, Flood Tolerant	Shrub and forested wetlands	Wildlife: Brown thrasher, ruby-throated hummingbird, ruffed grouse, yellow throat; chipmunk, deer, white-footed mouse, vole Food: Fronds, filldheads
Foamflower	<i>Tiarella cordifolia</i>	Up to 1'		Full/Part Shade	Moist	Rich woods	Wildlife: Songbirds and mammals Food: Leaves
Goldenrod (Rough or Grass-Leaved)	<i>Solidago spp.</i>	1-5'		Full Sun	Dry or Moist	Wet meadows, marshes, damp swales	Wildlife: Goldfinch, junco, ruffed grouse, swamp sparrow; butterflies and other insects; cottontail, meadow mice Food: Seeds, nectar

Common Name(s)	Latin Name	Height	Light Preference	Soil Preference	Habitat	Associated Birds & Mammals (Cover, Nesting or Food) & Food Value
Groundcover/Herbaceous Perennials (Continued)						
Hay-Scented Fern	<i>Dennstaedtia punctiloulia</i>	Up to 2'	Full/Part Shade or Full Sun	Moist	Woodlands, hillside pastures	Wildlife: Mammals Food: Fronds, fiddleheads
Interrupted Fern	<i>Osmunda punctiloulia</i>	3-4'	Full/Part Shade	Moist	Woodland edges, stony dry soil	Wildlife: Mammals Food: Fronds, fiddleheads
Jewelweed (Spotted-Touch-Me-Not)	<i>Impatiens capensis</i>	2-5'	Full/Part Shade or Full Sun	Moist, Flood Tolerant	Shrub and forested wetlands, streambanks	Wildlife: Ring-necked pheasant, ruffed grouse, ruby-throated hummingbird, veery; butterflies and other insects; white-footed mouse Food: Nectar, seeds
Joe Pye Weed	<i>Eupatorium purpureum</i>	2-6'	Full Sun	Moist, Flood Tolerant	Wet meadows, marshes, shores	Wildlife: Ruby-throated hummingbird, swamp sparrow; butterflies and other insects; cottontail, muskrat, raccoon Food: Nectar
New England Aster	<i>Aster novae-angliae</i>	Up to 5'	Full Sun	Dry or Moist	Wet meadows, wetlands	Wildlife: Songbirds; butterflies and other insects Food: Nectar, seeds
Ostrich Fern	<i>Pteritis pensylvanica</i>	Up to 6'	Full/Part Shade		Shrub and forested wetlands	Wildlife: Mammals Food: Fronds, fiddleheads
Partridgeberry	<i>Mitchella repens</i>	Up to 1'	Full/Part Shade	Dry or Moist	Rich woods	Wildlife: Grouse, mammals Food: Berries
Rattlesnake Manna Grass	<i>Glyceria canadensis</i>	Up to 3'	Full Sun	Moist	Marshes, bogs, forested wetlands, lakeshores	Wildlife: Songbirds and mammals Food: Seeds
Rice Cutgrass	<i>Leersia oryzoides</i>	Up to 5'	Full Sun	Moist, Flood Tolerant	Primarily fresh marshes	Wildlife: Deer, muskrat, moose Food: Seeds, foliage
Riverbank Grape (Vine)	<i>Vitis riparia</i>	Up to 25'	Full/Part Shade or Full Sun	Moist	Streambanks	Wildlife: Pileated woodpecker, ruffed grouse, wild turkey, wood duck; various mammals Food: Fruit
Royal Fern	<i>Osmunda regalis</i>	Up to 5'	Full/Part Shade or Full Sun	Moist, Flood Tolerant	Shrub and forested wetlands	Wildlife: Mammals Food: Fronds, fiddleheads
Sensitive Fern	<i>Onoclea sensibilis</i>	Up to 3'	Full/Part Shade	Moist, Flood Tolerant	Shrub and forested wetlands	Wildlife: Black-capped chickadee, ruffed grouse; bear, deer Food: Buds, foliage
Sheep Laurel	<i>Kalmia angustifolia</i>	Up to 4'	Fall/Part Shade or Full Sun	Dry, Moist, Flood Tolerant	Shrub and forest wetlands, fields/pastures	Poisonous to livestock.
Swamp Milkweed	<i>Asclepias incarnata</i>	Up to 2'	Fall/Part Shade	Moist	Wet meadows, wetlands, thickets, shores	Wildlife: Black duck, mallards, red-winged blackbird, ruby-throated hummingbird; Monarch butterfly, other butterflies and insects; muskrat Food: Nectar, seeds

Common Name(s)	Latin Name	Height	Light Preference	Soil Preference	Habitat	Associated Birds & Mammals (Cover, Nesting or Food) & Food Value
Groundcover/Herbaceous Perennials (Continued)						
Sweet Fern	<i>Comptonia perigrina</i>	1-3'	Full/Part Shade or Full Sun	Dry	Open, dry sandy soils and pastures	Wildlife: Flickers, sharp-tailed grouse; deer, moose Food: Fruit
Tall Meadow Rue	<i>Thalictrum polygamum</i>	2-8'	Full/Part Shade	Moist	Wetlands, wet meadows, streamsides	Wildlife: Bees, butterflies Food: Nectar
Tussock Sedge	<i>Carex stricta</i>	Up to 4"	Full Sun	Moist, Flood Tolerant	Marshes, rich woods	Wildlife: Finches, ruffed grouse, snipe, sparrows; deer Food: Seeds, foliage
Twinflower	<i>Linnaea borealis</i>	Up to 6"	Full/Part Shade	Moist	Rich woods	Wildlife: Mammals Food: Foliage
Virginia Creeper (Vine)	<i>Parthenocissus quinquefolia</i>	Up to 25'	Full/Part Shade or Full Sun	Dry or Moist	Woods, rocky banks	Wildlife: Bluebird, great-crowned flycatcher, red-eyes vireo, pileated woodpecker Food: Berries
Whorled Loosestrife	<i>Lysimachia quadrifolia</i>	Up to 4'	Full/Part Shade or Full Sun	Dry or Moist	Dry or moist open woods, thickets	Wildlife: Mammals Food: Foliage
Wild Sarsaparilla	<i>Aralia nudicanlis</i>	8-15"	Full/Part Shade	Dry or Moist	Upland woods	Wildlife: Mammals Food: Foliage, seeds, berries
Wintergreen (Teaberry/Checkerberry)	<i>Gaultheria procumbens</i>	Up to 4"	Full Sun	Dry	Oak woods, sandy soils	Wildlife: Partridge, ruffed grouse, songbirds; chipmunk, deer, moose Food: Fruit, foliage

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